

100383

CDM FEDERAL PROGRAMS CORPORATION

March 1, 1990

Ms. Elaine Spiewak
TES VII Regional Project Officer
U.S. Environmental Protection Agency
CERCLA Enforcement Section
841 Chestnut Street, 6th floor
Philadelphia, PA 19107

PROJECT: EPA CONTRACT NO.: 68-W9-0004

DOCUMENT NO.: TES7-C03041-EP-BNLF

SUBJECT: Work Assignment C03041
January Monthly Report - RI/FS Oversight
Standard Chlorine Site
TES7-C03041-RT-BNLG-02

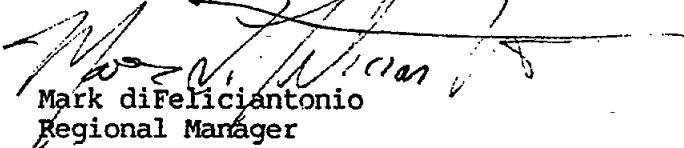
Dear Ms. Spiewak:

Please find enclosed the January Monthly Report - RI/FS Oversight for the Standard Chlorine Site, Delaware City, Delaware as partial fulfillment of the reporting requirements for this work assignment.

If you have any comments regarding this submittal, please contact me at (215) 293-0450 within two weeks of the date of this letter.

sincerely,

CDM Federal Programs Corporation (FPC)


Mark diFeliciantonio
Regional Manager

MdF/sl

Enclosures

cc: [REDACTED], EPA Work Assignment Manager, CERCLA Region III
Jean Wright, TES VII Zone Project Officer (letter only)
Constance V. Braun, FPC Program Manager
Robert Murphy, Versar Inc. (letter only)

JANUARY MONTHLY REPORT
RI/FS OVERSIGHT
STANDARD CHLORINE SITE

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, D.C. 20460

Work Assignment No.	:	C03041
EPA Region	:	III
Site No.	:	3PH6
Contract No.	:	68-W9-0004
CDM Federal Programs		
Corporation Document No.	:	TES7-C03041-RT-BNLG-02
Work Assignment Project Manager	:	Kathryn Garris
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Date Prepared	:	March 1, 1990

AR304019

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Attachment 2: Copies of CLP Paperwork

Attachment 3: Photographs

AR304020

1.0 INTRODUCTION

CDM Federal Programs Corporation (FPC) received a work assignment (WA No. C03041) for continued enforcement support to the U.S. Environmental Protection Agency (EPA) Region III during a Remedial Investigation/Feasibility Study (RI/FS) at the Standard Chlorine of Delaware, Inc. (SCD) site located in Delaware City, Delaware. The TES VII Team Member is conducting oversight of field investigations performed by the RP and their contractor, Roy F. Weston, Inc., and their drilling subcontractor, James G. Anderson Drillers, and is accepting split samples.

Standard Chlorine of Delaware, Inc. manufactures chlorobenzenes on a 46-acre site in Delaware City, Delaware. In September 1981, about 5,000 gallons of monochlorobenzene spilled from a railroad car on the Standard Chlorine property. Subsequent sampling was performed and identified chlorobenzenes in onsite soils, in shallow ground water underlying the site, and in nearby Red Lion Creek. The RP and their contractor, Roy F. Weston, Inc., have studied this problem and have prepared reports on the extent of contamination, evaluated remedial alternatives and feasible technologies, and have begun recovery of contaminated ground water at the site. In September 1985, the SCD site was proposed by the EPA for the National Priorities List (NPL).

On January 5, 1986, onsite storage tanks ruptured and 562,000 gallons of paradichlorobenzene and trichlorobenzene were spilled onto the SCD property and into the adjacent wetlands. The RP engaged a remedial contractor and initiated clean-up activities within hours of the spill occurrence. The RP and the clean-up contractor prepared the ESD detailing emergency clean-up activities and ongoing remedial activities at the SCD site.

Standard Chlorine signed a consent order with the Delaware Department of Natural Resources and Environmental Control (DNREC) on January 22, 1988. As required in the consent order, they submitted a Phase I RI/FS work plan for approval by DNREC. The consent order was then amended so that a single site-wide RI/FS could be performed. A revised RI/FS work plan was then submitted to EPA and DNREC and was approved for the current activities at the SCD site.

2.0 SUMMARY OF ACTIVITIES

The TES VII Team Member conducted oversight of the RP contractor's field investigations and accepted split samples from January 3, 1990, through January 31, 1990, at the SCD site located in Delaware City, Delaware. A summary of the field activities observed and the split samples accepted by the TES VII Team Member are presented in this section. Details of the daily activities performed at the site were recorded in the field notebook. Copies of the notebook are included as Attachment 1. Split samples were shipped and analyzed under the Contract Laboratory Program (CLP). Copies of CLP sample paperwork can be found in Attachment 2. Additionally, photographs were taken during oversight activities and are included as Attachment 3.

The following personnel were at the SCD site between January 3, 1990, and January 31, 1990:

<u>Personnel</u>	<u>Affiliation</u>	<u>Dates on Site</u>
Lorna Luebbe	TES VII Team	January 15, 16, 17, 23, 24, 25, 29, 30, and 31
David Spencer	TES VII Team	January 3, 4, 5, 9, 10, and 11
Jan Spohn	TES VII Team	January 3, 4, 5, 9, 10, 11, and 12
Dave Cairns	Weston	January 3, 4, 5, 9, 10, 11, 12, 15, 16, 17, 23, 24, 25, 30, and 31
Lyn Lawlor	Weston	January 3, 4, 5, 9, 10, 11, and 29
Dale Davis	Weston	January 3, 4, and 5
Kevin Hansen	Weston	January 30 and 31
Bob Touhey	SCD	January 16, 29, and 30
John Urban	James Anderson Drilling	January 9, 10, 11, 12, 15, 16, 17, 23, 24, 25, 30, and 31
Joe Jester	James Anderson Drilling	January 9, 10, 11, 12, 15, 16, 17, 23, 24, 25, 29, 30, and 31
Dave Borrel	James Anderson Drilling	January 9, 10, 11, 12, 15, 16, 17, 23, 24, 25, 29, 30, and 31
Surveyors	Lippincott	January 23, 24, 25, 29, 30, and 31

On January 3, the RP contractor completed wetlands screening by collecting samples at 4 additional grid points. Samples were obtained from three depths at each of the 4 grid locations: 0-1 foot, 1-2 feet, and 2-3 feet. Hand augers, stainless steel trowels, and/or scoopulas were used to obtain the samples. The samples were placed in jars; aluminum foil was placed over the openings; and the lids were securely fastened. After a minimum of 1 hour, a headspace reading was obtained from each jar using an OVA and an HNu. All samples were obtained with sampling personnel in level D protection.

From January 3, 1990, to January 5, 1990, the RP contractor completed sampling of the west (upstream) end of the wetlands. Samples were obtained from a depth of 0 to 6 inches below ground surface. Due to site conditions, some samples were actually collected from a depth of 0 to 12 inches below ground surface. During the week, 52 samples were collected by the RP contractor, including duplicates and blanks. The TES VII Team Member accepted the following split samples:

<u>TES VII</u> <u>Sample Number</u>	<u>RP Contractor</u> <u>Sample Number</u>	<u>Sample Location</u> <u>Description</u>
WS-1	SS-T-23-1-1	Wetlands sediment
WS-2	SS-T-23-1-1	Wetlands sediment
WS-3	SS-T-25-1-1	Wetlands sediment
WS-4	SS-T-39-1-1	Wetlands sediment
WS-5	SS-P-14-1-1	Wetlands sediment
WS-6	SS-R-17-1-1	Wetlands sediment
WS-7	SS-W-12-1-1	Wetlands sediment
EQB-2	SS-T-41-1-3	Equipment blank
TB-26	-----	Trip blank

From January 9, 1990, to January 10, 1990, the RP contractor completed soil borings around the catch basin and collected samples. All sampling and drilling were performed in level D protection. A Failing F-7 drilling rig was used to obtain split spoon samples every 2 feet from 0 to 20 feet at four different boring locations. For the first borehole, Weston bottled all samples to determine the zone (i.e., depth) of highest contamination with an HNu. For the remaining three boreholes, the sample from 0 to 10 feet with the highest HNu reading and the sample from 10 to 20 feet with the highest HNu reading were collected for analysis from each boring. For the first boring, the HNu readings ranged from 2 ppm to 300 ppm; the highest reading was obtained from a depth of 6 to 8 feet below the ground surface. For the second

boring, the HNu readings ranged from 0 ppm to 270 ppm, and the highest reading was obtained from a depth of 12 to 14 feet below the ground surface. For the third boring, the HNu readings ranged from 2 ppm to 450 ppm, with the highest reading obtained from a depth of 12 to 14 feet below the ground surface. Finally, for the fourth boring, the HNu readings ranged from 3 ppm to 550 ppm; the highest reading was obtained from a depth of 18 to 20 feet below the ground surface. The drilling rig and all equipment were steam cleaned before activities began and after each boring. The split spoons were decontaminated using an Alconox detergent wash, a water rinse, a methanol rinse, and a final DI water rinse. All cuttings were placed on a plastic sheet and were subsequently placed into 55-gallon drums.

A total of 13 samples, including duplicates and blanks, were collected by the RP contractor for laboratory analysis. The TES VII Team Member accepted the following split samples:

<u>TES VII Sample Number</u>	<u>RP Contractor Sample Number</u>	<u>Sample Location Description</u>
CB-1	SB-3-7-1	Catch basin boring
CB-2	SB-4-5-1	Catch basin boring
EQB-3	SB-1-1-3	Equipment blank
TB-27	-----	Trip blank

From January 11, 1990, to January 31, 1990, the RP contractor installed 7 monitoring wells. A Failing F-7 drilling rig with hollow stem augers (6-inch inner diameter and 10-inch outer diameter) was used to drill the well borings. Split spoon samples were obtained every five feet, and the sample with the highest HNu reading from each well boring was collected for laboratory analysis. All drilling and sampling was performed in level D protection. The drilling rig and equipment were steam cleaned prior to initiating well installation and were also steam cleaned after the installation of each well. The split spoons were decontaminated with an Alconox detergent wash, a water rinse, a methanol rinse, and a final DI water rinse.

Monitoring well MW-9 was installed from January 11, 1990, to January 15, 1990. The well was drilled to a depth of 51 feet below the ground surface. The water table was reached at 36.5 feet below the ground surface, and clay was first encountered at a depth of 45 feet. The well screen was placed to a depth of 47 feet and consisted of a 10-foot section of 4-inch diameter

stainless steel with a .020-inch slot size. The riser pipe consisted of 39 feet of 4-inch diameter stainless steel. A sandpack was placed up to 32 feet below the ground surface using 400 pounds of sand. A bentonite seal was placed on top of the sandpack using 30 gallons of bentonite slurry. Grout cement was placed on top of the bentonite seal using 40 gallons of cement grout mixed with 5 percent bentonite. The following HNu and OVA readings were obtained from the following depths for well MW-9:

<u>Depth</u>	<u>Hnu reading</u>	<u>OVA reading</u>
0-2 feet	0 ppm	0 ppm
5-7 feet	0 ppm	0 ppm
10-12 feet	0 ppm	0 ppm
15-17 feet	0 ppm	0 ppm
20-22 feet	0 ppm	0 ppm
25-27 feet	0 ppm	0 ppm
30-32 feet	0 ppm	0 ppm
35-37 feet	0 ppm	1 ppm
40-42 feet	5 ppm	2 ppm
45-47 feet	1 ppm	7 ppm
47-49 feet	0 ppm	0 ppm
49-51 feet	0 ppm	0 ppm

Monitoring well MW-7 was installed from January 16, 1990, to January 22, 1990. The well was drilled to a depth of 62 feet below the ground surface. The water table was reached at 41.6 feet below the ground surface, and clay was first encountered at a depth of 57 feet. The well screen was placed to a depth of 58 feet and consisted of a 10-foot section of 4-inch diameter stainless steel with a .020-inch slot size. The riser pipe consisted of 50 feet of 4-inch diameter stainless steel. A sandpack was placed up to 41.3 feet below the ground surface using 500 pounds of sand. A bentonite seal was placed by tremie on top of the sandpack up to 35 feet below the ground surface using 30 gallons of bentonite slurry. Grout cement was placed on top of the bentonite seal using 135 gallons of cement grout mixed with 5 percent bentonite.

The following HNu and OVA readings were obtained from the following depths for well MW-7:

<u>Depth</u>	<u>Hnu reading</u>	<u>OVA reading</u>
0-2 feet	0 ppm	0 ppm
5-7 feet	0 ppm	0 ppm
10-12 feet	0 ppm	0 ppm
15-17 feet	0 ppm	3 ppm
20-22 feet	0 ppm	4 ppm
25-27 feet	0 ppm	0 ppm
30-32 feet	0 ppm	2 ppm
35-37 feet	0 ppm	0 ppm
40-42 feet	0 ppm	1 ppm
45-47 feet	60 ppm	22 ppm
50-52 feet	30 ppm	30 ppm
52-54 feet	100 ppm	200 ppm
54-56 feet	100 ppm	250 ppm
56-58 feet	50 ppm	250 ppm
58-60 feet	50 ppm	100 ppm
60-62 feet	7 ppm	Not taken

Monitoring well MW-6 was installed from January 22, 1990, to January 23, 1990. The well was drilled to a depth of 68 feet below the ground surface. The water table was reached at 43 feet below the ground surface; and clay was first encountered at a depth of 65 feet. The well screen was placed to a depth of 67.5 feet and consisted of a 10-foot section of 4-inch diameter stainless steel with a .020-inch slot size. The riser pipe consisted of 59.5 feet of 4-inch diameter stainless steel. A sandpack was placed up to 50 feet below the ground surface using 500 pounds of sand. A bentonite seal was placed by tremie on top of the sandpack up to 45 feet below the ground surface using 30 gallons of bentonite slurry. Grout cement was placed on top of the bentonite seal by tremie using 40 gallons of cement grout mixed with 5 percent bentonite.

Monitoring well MW-8 was installed from January 24, 1990, to January 25, 1990. The well was drilled to a depth of 55 feet below the ground surface. The water table was reached at 36.5 feet below the ground surface, and clay was first encountered at a depth of 51 feet. The well screen was placed to a depth of 51 feet and consisted of a 10-foot section of 4-inch diameter stainless steel with a .020-inch slot size. The riser pipe consisted of 43 feet of 4-inch diameter stainless steel. A sandpack was placed up to 35 feet below the ground surface using 400 pounds of sand. A bentonite seal was placed by tremie on top of the sandpack up to 30 feet below the ground surface using 30 gallons of bentonite slurry. Grout cement was placed on top of the

bentonite seal by tremie using 120 gallons of cement grout mixed with 5 percent bentonite. The following HNu and OVA readings were obtained from the following depths for well MW-8:

<u>Depth</u>	<u>Hnu reading</u>	<u>OVA reading</u>
0-2 feet	0 ppm	0 ppm
8-10 feet	0 ppm	0 ppm
13-15 feet	0 ppm	0 ppm
18-20 feet	0 ppm	0 ppm
23-25 feet	0 ppm	1.5 ppm
28-30 feet	0 ppm	0 ppm
33-35 feet	0 ppm	1 ppm
38-40 feet	1 ppm	7 ppm
43-45 feet	0 ppm	6 ppm
45-47 feet	0 ppm	6 ppm
47-49 feet	0 ppm	8 ppm
49-51 feet	0 ppm	11 ppm
51-53 feet	0 ppm	9 ppm
53-55 feet	0 ppm	8 ppm

Monitoring well MW-2 was installed from January 26, 1990, to January 29, 1990. The well was drilled to a depth of 65 feet below the ground surface. The well screen was placed to a depth of 64 feet and consisted of a 10-foot section of 4-inch diameter stainless steel with a .020-inch slot size. The riser pipe consisted of 56 feet of 4-inch diameter stainless steel. A sandpack was placed up to 49 feet below the ground surface using 400 pounds of sand. A bentonite seal was placed by tremie on top of the sandpack up to 44 feet below the ground surface using 30 gallons of bentonite slurry. Grout cement was placed by tremie on top of the bentonite seal using 170 gallons of cement grout mixed with 5 percent bentonite.

Monitoring well MW-3 was installed from January 29, 1990, to January 31, 1990. The well was drilled to a depth of 67 feet below the ground surface. The water table was reached at 41 feet below the ground surface, and clay was first encountered at a depth of 65 feet. The well screen was placed to a depth of 63 feet and consisted of a 10-foot section of 4-inch diameter stainless steel with a .020-inch slot size. The riser pipe consisted of 55 feet of 4-inch diameter stainless steel. A sandpack was placed up to 48 feet below the ground surface using 400 pounds of sand. A bentonite seal was placed by tremie on top of the sandpack up to 44 feet below the ground surface using 30 gallons of bentonite slurry. Grout cement was placed on top of the

bentonite seal using 100 gallons of cement grout mixed with 5 percent bentonite. The following HNu and OVA readings were obtained from the following depths for well MW-7:

<u>Depth</u>	<u>Hnu reading</u>	<u>OVA reading</u>
0-2 feet	0 ppm	0 ppm
8-10 feet	0 ppm	0 ppm
13-15 feet	0 ppm	0 ppm
18-20 feet	0 ppm	0 ppm
23-25 feet	0 ppm	0 ppm
28-30 feet	0 ppm	0 ppm
33-35 feet	0 ppm	1 ppm
38-40 feet	0 ppm	0 ppm
43-45 feet	0 ppm	150 ppm
48-50 feet	0 ppm	250 ppm
53-55 feet	0 ppm	80 ppm
58-60 feet	0 ppm	40 ppm
63-65 feet	No recovery	No recovery

3.0 PROBLEMS AND RESOLUTIONS

During the soil boring sample collection, which took place January 9, 1990, through January 10, 1990, the split spoon sampler did not yield sufficient soil to fill the sample bottleware when the TES VII Team Member obtained a split sample. To resolve this problem, composite samples were collected at the locations where the TES VII Team Member received split samples.

During monitoring well installation, the RP contractor experienced difficulty avoiding bridging when the bentonite seal was placed down borehole. This problem was due to the minimal 1/2 inch space between the riser pipe fitting and the auger. To resolve the problem on well MW-9, the augers were pulled before the bentonite seal was placed down the borehole. For the remaining wells, the RP contractor cut the fittings off of the riser pipe and welded sections of pipe together, so that a 1/2-inch diameter PVC tremie pipe could be used to place the seal and grout.

During the installation of well MW-9, the casing was lifted three feet when the augers were removed from the borehole. To resolve this problem, the screen and riser were removed, and the hole was redrilled.

The tremie pipe was not steam cleaned before the sealing and grouting of well MW-3. This was mentioned to the RP contractor, and the tremie pipe was steam cleaned prior to sealing and grouting the remaining wells.

4.0 FUTURE ACTIVITIES

During February, the RP contractor plans to finish monitoring well installation by adding two more wells. Following this activity, which is scheduled to be completed in two weeks, well development will be completed and will be followed by ground-water sampling in late February or early March. Fish samples will also be collected in early March.

ATTACHMENT 1

Copies of Field Notebook

AR304031

JAN. 3, 1990 97

14:30 WESTON TAKES SAMPLES
FROM POINT O-13. O-1, 1'-3', &
TAKES 100' OF THE TRAIL.

16:00 WESTON TAKES SAMPLES AT POINT
POINT O-13. O-1, 1'-3', & 3'
SAMPLED WESTERN TRAIL.

15:00 WESTON CALLS CO-OP TO
TO DECIDE EXPERIMENTAL

16:15 WESTON CALLS CO-OP TO
STATE THAT THEY
WILL WORK TOMORROW TO
FINISH SIGHTING OUT
THE SETTLEMENT
16:30 WESTON FINISHES SIGHTING
ESTABLISHES
17:30 WESTON LEAVES JOB
SITE

0930 VERSAR (D. SPENCER & J. SPENCER)
ON SITE. WORKS MOSTLY SURVEY. 35°
16:15 WESTON (D. CANNAS & D. DAVIS)
ARRIVE AT SITE AND OPEN SHOT.
They BEGIN decommissioning equip.
IN PREPARATION FOR TODAY'S SNAPPING.

11:05 L. LAWLER ARRIVES AT SITE.
Decom continues. He states that
several screening locations remain.
They will complete those first
and then begin snapping at the
west (opposite) end of the
wetlands.

13:00 WESTON RETURNS FROM LUNCH.

13:15 WESTON FINISHES SIGHTING
ESTABLISHES
14:30 WESTON LEAVES JOB
SITE

13:15 WESTON AND VERSAR PROCEED TO
WETLANDS TO FINISH WETLANDS SIGHTING.

AR304032

98

1325 Western Samples located at
Grid Point S-14 TAKES
Samples at 0'-1', 1'-2', 2'-3'

1445 western samples taken up samples.
They are going to take samples
on the samples collected today.
No other lenses.

1330 Western Samples SCID Located
R-14 TAKES Samples From
0'-1', 1'-2', & 2'-3'

1450 Western offsite

1335 Western Samples grid located
Q-14 TAKES Samples From
0'-1', 1'-2', & 2'-3'

1440 Western Samples grid located

P-14 TAKES Samples From 0'-1',
1'-2', & 2'-3'

1400

Western Decoding Augers.
No further sampling will
be completed today. This day morning
they will be attempting to collect
approx. 25 samples. They will start
around 9:00 am.

AR304033

100 TUESDAY 4, 1969

0845 Versus outsite (D. Spencer & J. Shum)
Weston (D. Carson, L. Lawler, D. Davis)
Onsite preparing for Sampling.
Lined up small & tall trees
0930 Weston power
field breaker (no #)
Jewell H.P.C.
water powered
flow directed into
towork stream
into bushy
various field
block selected

sample # 1002
Wells directed
flow direction is
left (west) 22°
which samples
downstream
versus high, i.e.,
water, benefits
power need less
of fuel used

AR304034

101

found, in 1 plastic
container. Many lit
water.

1035 Weston sample No. 55-T-42-101
O-L, Weston & SCD
SP (Lynn)
Ross Weston
sample No. 55-T-42-101
(Lynn)

Weston
SP (Lynn)
Ross Weston
sample No. 55-T-42-101
NOTE: 1) Specimen
samples will be collected
using bowl all
other trouble only
(Dale)

102
103

103

1110 Weston / Versor

Weston

Weston A.

SS-T-39-1-1

WS-4

(LYNN)

1110

SS-T-34-1-1

(DALE)

1140 Weston

No. SS-T-35-1-1

O-L"

(DALE)

1154 Weston Sample
No. SS-T-38-1-1
O-A"

(LYNN)

1155 Weston Sample
No. SS-T-39-1-1
O-L"

(LYNN)
sample mixed
(DALE)

103

AR304035

JRC

JRC

175

575

1260 Weston Sample
No. 35-T. 39. 1.
O. 6" (L4NN)
AR 304036

1225 Weston Sample
No. 65-T. 1.
O. 6" (L4NN)
AR 304036

1217 Weston Sample No
35-T. 31-1.
O. 6" (L4NN)
AR 304036

CE
50 ft. from bowl prior
to collecting sample
and collected sample
without gloves
gatherer was advised
not to use gloves or
gloves w/ gloves

AR 304036

105

1303 Weston sample No
No S.S.T. (Davie)
0.6" (Davie)

1310 Weston

sample No

S.S.T. 35' 11"
0.6" (Davie)
vergar sample

1315 Weston

sample No
S.S.T. 27' 11"
(0.6") (Davie)

1345

Weston sample No
S.S.T. 27' 11"
0.6" (Davie)

1347

AR304037

TR

105

108

1355 WESTON
SAMPLE No
35.5.24.1.1
(2.6") (DAVE)

1410

1357 WESTON
SAMPLE No
35.5.23.1.1
0-4" (LYNN)

1435 WESTON
SAMPLE No
35.5.23.1.1
0.4" (LYNN)

109

1435 WESTON
SAMPLE No
35.5.23.1.1
0.4" (LYNN)

1435 WESTON
SAMPLE No
35.5.23.1.1
0.4" (LYNN)

1410 WESTON
SAMPLE No
35.5.23.1.1
WESTON / SCD
35.5.23.1.1 (DAVE)
AR3040

1435 WESTON
SAMPLE No
35.5.23.1.1
WESTON / SCD
35.5.23.1.1 (DAVE)
AR3040

Verstar split
and Dug up

1413 WESTON SAMPLE
No 35.5.23.1.1
(LYNN), 0-4"

Picture or location taken
AR3040

1410 WESTON SAMPLE
No 35.5.23.1.1
0-4" (LYNN)

Note: WESTON were
TIREK, surts, PVC
waves & bodies

JES

110

for all sampling
1959 January 20th
samples for
supplement

Note: Due to the
conditions some of
the samples were
actually taken from
2 depths of 0-12"

- 111 Grandin Jan 5, 1970
Office (check) on site
(D. Lanes & G. Hoss)
(Others: Lewis and
mild)
- 112 D. incin. labelled
5M.O. to afford
sample alignment. If side
1 or 2 our metal & epoxide
1 or 2 our metal & epoxide
Total 26 4575.150502
spoke w/ Susan
② SMO
also reported anticyclonal
After night on 1/5/90
2 202 hour pull
= 1st hour 80% yes my
1 ag hour pull
1 ag hour 10% only
Total 34 4575.150516
Metallic Pulls and
the others (D. Lewis &
G. Hoss) & D. Lanes)
- 113 Viscous off sites
to determine consumption
agreement (not 100%)
JAS
- 114 AR304039

JAS

162

one Viccar took. 2) short
sample at the location
Viccar took
together from sampling

1034 Victoria sample
no. 55 - R. 1.1.
0-6" (2mm)

1035 Victoria
sample
no. 55 - R. 1.1.
0-6" (2mm)

1042 Victoria
sample
no. 55 - R. 1.1.
Viccar # 45-10
(0-3") - Dark

1042 Victoria
had not taken
a sample from
TIC area, 1/4 km
at location
T- 45 - base

JAS

113

Viccar took. 2) short
sample at the location
Viccar took
Victoria received
sample no. 55-T-25-1.
from TIC only
local limestone expected
2 small samples
from TIC (Viccar # 45-3)

1054 Victoria sample
no. 55-T-17-41.1
0-6" (2mm)

1055 Victoria
sample
no. 55 - V. 17-1.1
0-6" (2mm)
limestone
2 small samples
from TIC limestone
local limestone
Boulders were found
near surface
no sugar at sea

JAS

R304040

114

115
115. 15. 1. 1
15. 1. 1
15. 1. 1

116. Under branch
116. 15. 1. 1
116. 15. 1. 1
116. 15. 1. 1
116. 15. 1. 1

117. Under branch
117. 15. 1. 1
117. 15. 1. 1
117. 15. 1. 1

118. Under branch
118. 15. 1. 1
118. 15. 1. 1
118. 15. 1. 1

119. Under branch
119. 15. 1. 1
119. 15. 1. 1
119. 15. 1. 1

120. Under branch
120. 15. 1. 1
120. 15. 1. 1
120. 15. 1. 1

115

116. Under branch
116. 15. 1. 1
116. 15. 1. 1
116. 15. 1. 1

117. Under branch
117. 15. 1. 1
117. 15. 1. 1
117. 15. 1. 1

118. Under branch
118. 15. 1. 1
118. 15. 1. 1
118. 15. 1. 1

119. Under branch
119. 15. 1. 1
119. 15. 1. 1
119. 15. 1. 1

120. Under branch
120. 15. 1. 1
120. 15. 1. 1
120. 15. 1. 1

JRS

AR304041

1328 Union Inn Rd
return to trailer
samples

1330 Union Inn Rd
return to trailer
samples
bench break

1333 Union Inn Rd
no 55-C 43.1:1
(3.4") open

1334 Union Inn Rd
no 55-C 43.1:1
open

Union Inn Rd
no 55-C 43.1:1
samples

115

1410 "Diatom sample
#20: 25-T-1111
#21: 25-T-1112
both from
acidified
water

1420 Diatom sample
#22: V-1111
#23: V-1112
both from
acidified
water

Note: All diatom samples
are acidified
acid. V-1111
BNR & water bottle
#43-Some living
organisms
R3040

119

1440 Venon sample
framework and
impacting samples
for shipment
as is

as has been
assigned for the
SAS project for soft
others TOC only. The
other samples (ie
methane gas, chlorophyll
and others) will
be stored in ice
water) 1/8/90

1450 Venon sample
packaged for
shipment to
Oceans Environmental
The shipment consists
of: 2 soil low pH
5 soil low pH/ice
4 as your
ice water

JMBill # 4575150510
TBS

120

1600 TCC launched from
Chukamento consisting
of 7 soil cores TCC
2 air TCC
1 suspended
Outhill # 4575150524

1630 Recovery sample
(55) placed in
plastic bags and
placed on ice

Whistons anticipated
schedule for this
work of 18/9/00
according to J. Brown
as follows:

Mon: Drills of Drill
rig and saturation
of barrels; no
backfilling
Tue-Fri: Backfill, soil
curing samples
Sat-Sun: Curing

121

then began installation
of monitoring wells

lakes
Vicksburg site to
ship sampling
wells (initially 8 wells)

Initial Note:

- Whistons personnel were
- stark, auto PVC gloves
- and boots for all
- sampling.
- Due to site conditions
- some of the samples
- were actually collected
- from a depth of
- 10-12'
- Select samples were
- collected from a
- rising bank; all other
- samples were collected
- directly from the
- surface of the soil,

JRS

AR304044

JRS

122

Monday Jan 3, 1990

4:00 - 4:30 AM, Vicksburg
SMO to first segment
sampled, downstream
flow w/ 100% yield
reported; following
information:

5K5 No. 5155C TASK 1
and TASK 2 to 101
shipped on 1/8/90

1 task
101
101

74.501, low

1, AQ, low

REB# 4375150520

task 2

Chlorinated benzene
to 101E zinc

7, 501, low

1, AQ, low

REB# 4375150521

123

Minerality of samples
collected on 1/3/90-1/5/90

Vessel #	Washer #	TTR	OTR	SAS No 5155C- TASK 4
WS-1	SS-T-3-1-1	mcrc2	BF.72	-01.
WS-2	SS-T-3-1-2	mcrc2	BF.73	-02.
WS-3	SS-T-3-1-1	-	BF.74	-03.
WS-4	SS-T-3-1-1	-	BF.75	-04.
WS-5	SS-P-3-1-1	-	BF.76	-05.
WS-6	SS-R-3-1-1	-	BF.77	-06.
WS-7	SS-W-3-1-1	-	BF.78	-07.
ESB:2	SS-T-4-1-1-3	mcrc2	BF.79	-08.
TFR:20	-	-	BF.80	-

AR304045

JRC

104

Wednesday June 7, 1970

OSCO Vicksburg (9) (partially
A. Sincere) (part-site)
Weather: Showed
ice and paper
covered, blue sky,
temperature 85°
to 90°, mid. 85°
Wester (D. Davis)
on-site

Dishes on-site
from James C.
Henderson Assoc.
1000 ft. down (part
on-site)

1000 ft. down
water work area
to clean sand
Cone Shredder
and
Dishes instead
of water (part)

AR304046

105

Brick, lighter brick,
sand, rock; PVC pipes
and metal tools, wood
Tall concrete
box carrying generators
4 boxes (one greater,
one small) (J.A.)
Lining around
generator box
Lining in well site,
brick right &
brick 3-30; at
the location
iron pipe, 1/2 inch
Lining with flexible
to support the lining
to support foundation
The brick skirt
first 20 feet
brick box 15 ft.
brick box 15 ft.

105 m. 2! above sand
5-14-11-9
as strong
in sample no 55-1-1-1
in another
J.A.

12.0

11.9 4-5' W. 10' 10' 10'
2-3' 5' 5' 5' 5' 5' 5'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'

12.7

11.8 4-5' W. 10' 10' 10'
2-3' 5' 5' 5' 5' 5' 5'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'

11.5 2-4' W. 10' 10' 10'
2-3' 5' 5' 5' 5' 5' 5'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'

11.2 4-5' W. 10' 10' 10'
2-3' 5' 5' 5' 5' 5' 5'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'

11.1 4-5' W. 10' 10' 10'
2-3' 5' 5' 5' 5' 5' 5'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'

11.0 4-5' W. 10' 10' 10'
2-3' 5' 5' 5' 5' 5' 5'
1/2' 1/2' 1/2' 1/2' 1/2' 1/2' 1/2'

AR304047

128

12:20 12-15 "Dustion
SB-2-4
HNu: 4 PM
so. 5 min
stained

12:27 12-20 "Dustion
SB-2-10-1
HNu: 90 PM

12:30 1st punch hole
corral gate, back
bits straw
cleaned, cleaned
placed in room

12:45 Ranch break

12:45 1st big
punch hole
bits straw
cut up
Ranch time
AR304048

129

12:20 12-15 "Dustion
SB-2-4
HNu: 4 PM
so. 5 min
stained

12:37 2-4 "Dustion
SB-2-1
HNu: 50 PM

1345 4-4 "Dustion
SB-2-3-1
HNu: 10 PM

1347 6-8 "Dustion
SB-2-4-1
HNu: 17 PM
fin (cutting), 5 PM

1359 8-10 "Dustion
SB-2-5-1
HNu: 40 PM

408 10-12 "Dustion
SB-2-6-1
HNu: 140 PM
fin (cutting)
20 PM

130

1405 12-14' 'Winton
55-2-7-120
N.W. 1/4 50' from
bottom creek
bottom of slope

Note 1) Well broken
2) Both hammer
and my notebook
will leave for
last month the
first is replaced
tomorrow.

1405 Discovered
thin white
light brown
with streaks
and yellow tan

1405 Dark & white
light brown
with streaks
and yellow tan

131

1405 New road off
to present road
Diorite was cleared
up

1515 Vicksburg off side
first up stream
process 800
Note 1) Section well made
by sandstone from 0-20'
and one from 10-20'
from each height
and each height
reading

1515 Vicksburg off side
process 800
Note 1) Section well made
by sandstone from 0-20'
and one from 10-20'
from each height
and each height
reading

AR304049

133

Wednesday Jan. 10, 1990

Cico Vican (G. Sison)

D. Garcia (on-site)

J.C. (G. Vican, G. Gutierrez)

D. Buhale (on-site)

Wattin: light

rain mixed

in afternoon (in winter)

and recent rain

size.

things I wanted

to do:

14-15' 300 cm.

15-20' 200 cm.

20-25' 150 cm.

133
onto (in) soil substance

and it stay yellow

substance coated

bottoms of the

bottoms of auger

133 Auger taken to

be stem shaved

133 Big brush 3

1330 1000 1000

133 1000 1000

2" 1000 1000

3" 1000 1000

4" 1000 1000

and 5" 1000 1000

11th there, DT

initial

final: 10pm

04050

230pm

10

135

- 1027 3-4' elevation
#5B - 3-2'
NH4: 40 ppm
NO₂ 20 ppm
SO₂: 0.05 ppm

- 1028 3-4' elevation
#5B - 3-2'
NH4: 40 ppm
NO₂: 20 ppm
SO₂: 0.05 ppm

- 1029 3-4' elevation
#5B - 3-2'
NH4: 90 ppm
NO₂: 50 ppm
SO₂: 3"

- 1030 3-4' elevation
#5B - 3-2'
NH4: 800 ppm
NO₂: 500 ppm
SO₂: 3"

- 1031 3-4' elevation
#5B - 3-2'
NH4: 400 ppm
NO₂: 30 ppm
SO₂: 0.05 ppm

- 1032 3-4' elevation
#5B - 3-2'
NH4: 450 ppm
NO₂: 30 ppm
SO₂: 0.05 ppm

- 1033 3-4' elevation
#5B - 3-2'
NH4: 800 ppm
NO₂: 400 ppm
SO₂: 3"

- 1034 3-4' elevation
#5B - 3-2'
NH4: 800 ppm
NO₂: 400 ppm
SO₂: 3"

AR304051

JES

135

- Sample with #1/1
cotton block #1/1
soybean
welded (2) taken directly
from 12-14' 400 ppm (3)
green dark green #1

- 1029 3-4' elevation
#5B - 3-2'
NH4: 450 ppm
NO₂: 30 ppm
SO₂: 0.05 ppm

- 1030 3-4' elevation
#5B - 3-2'
NH4: 400 ppm
NO₂: 30 ppm
SO₂: 0.05 ppm

- 1031 3-4' elevation
#5B - 3-2'
NH4: 800 ppm
NO₂: 400 ppm
SO₂: 3"

JES

136

1.000 12-14' (W) down
- SB-3-7-1
BNA, 3N, 1N, 2N,
is nontoxic from
depths of 40-100'
(less than sample)

SB-3-7-1
SB-3-7-2 sand
SB-3-7-3 (MSD))

1.044 18-20' (W) down
SB-3-10-1
N/A: 320 ppm

Benthic 3 complete
ways build up
sample are thin
and same
cleared

AR20 3200 m depth
400

137

1.021 0-1' (W) down # SB-4-1-1
N/A: 25 ppm

1.023 2-4' (W) down #
SB-4-2-1
N/A: 3 ppm

1.031 4-6' (W) down #
SB-4-3-1
N/A: 50 ppm

1.035 4-8' (W) down #
SB-4-4-1
N/A: 10 ppm

1.044 8-10' (W) down #
SB-4-5-1
N/A: 90 ppm
Visual point sampled
no SB-2
VCA - oriented from
S-101

1.045 10-12' (W) down
Visual point sampled
S-101
VCA

100

138

1150 10-12' Uplift
SB-4-2-1
H.N.L.: 300 ppm

1152 12-14' Uplift
SB-4-7-1
H.N.L.: 220 ppm

1201 14-16' Uplift
SB-4-8-1
H.N.L.: 400 ppm

1202 16-18' Uplift
SB-4-9-1
H.N.L.: 375 ppm

1214 18-20' Uplift
SB-4-10-1
H.N.L.: 350 ppm

Surficial limestone
Quartzite 200 ft. down
deposited

139

1204 Lenticular bedrock
SB-4-10-1
H.N.L.: 250 ppm
Lenticular
correlation

Deposits east # 13445
Assigned to Laram
limestone
N.W. #

Assigned to
limestone
N.W. #

150' lower
as described

AR304053

JES

JES

1500
"Indoor session" 1st part
of 2nd day. Discussion
and walk # 3.
Saw some deer

1500 Located 3rd campsite
at 51° 25' N. Lat 2°
45' E. Supplied to: Bruce
Lindstrom
Archill F.

3, 40', low

1500 D. Straker to
cold place
of ice

Drilling stain
located

1520 Lictomy / Tech
laboratory
well insulation
1/11/90 st
405

1511

1500 We decided not
to go to camp today. We went
field activities for
part Vicks off-site

1505

442 Monday Jan 11, 1990

443

Adult female w/ 10 eggs

0745 Vulture site

(C. leucorh.) carc.
of buzzard in site
Mother: Descart,
Wild
adults in site)

Female vulture
seen on ground

0825 - 2nd vult
seen on ground
adult female vulture

0830

adult female vulture
seen on ground

adult female vulture
seen on ground

adult female vulture
seen on ground

eggs 5-7 mm long

survived

Adult: Open

All feathers used

damaged

0912 Adult female

adult vulture to

survived in nest.

Female vulture

seen on ground

adult female vulture

0937 15-17 mm long

adult female vulture

adult female vulture

adult female vulture

JRS

AR304055

JES

K5

1009 30. 62' 1st flt
Dish
NVA: open

OVA: open

1039 25-37! 40.1st
Dish
NVA: open
OVA: open1047 32. 3rd
Dish
NVA: open
OVA: open11:35 37! 4th flt
Dish
OVA: open
OVA: openDish
OVA: open11:31 5. 3rd flt
Dish
NVA: open
OVA: open

K5

1151 27. 4th flt
NVA 1st flt
OVA 7pm1231 Dishes' dishes (to)
Dish: Dishes
to receive @ approx
1800

1333 Dishes' dishes (to)

440 - 450's
5pmDish: dish
dishes' dishes
dishes' dishes
dishes' dishesdishes' dishes
dishes' dishes
dishes' dishes
dishes' dishes

AR304056

K5

Mac. 1961
Black duck
nest, N. Sheld. Is.
1961

Amherst Co., 1990

0800. *Vaccinium* (in shrub)
on the
island.

Black duck
nest, N. Sheld. Is.
1961

Black duck
nest,
Black duck
nest,

Black duck
nest, N. Sheld. Is.
1961
Black duck
nest, N. Sheld. Is.
1961
Black duck
nest, N. Sheld. Is.
1961

Black duck
nest, N. Sheld. Is.
1961

1965
Black duck
nest, N. Sheld. Is.
1965
Black duck
nest, N. Sheld. Is.
1965

148
Cecil
Second (total 420 lbs)
Record shows
approximately 20 British
Bomber

(two fittings).

149

1050 Brown
Shed corner well used
scratches

150
Inside is well
for storage in winter
or small shelter.
To prevent freezing
can be covered.

151 Inside. Used for
storage but other
storage was also
selected which happened
to be right for better
more room to store
furniture

152 Apple will be installed
to finish off 471
located well. 2.
Improved insulation
is now being installed
to avoid blocking
so that will work
to cut the cost 31.
One is higher
committed date the
second date is to
make the stay and
dull

Note: Some of difficulty
in getting 471
fitting to be right
for furniture
and place and

AR304058

153 Well screen is
taken to be clean
cleaned. This required
most work by getting
the place and

JRS

JRS

150

drilling well resume
on Monday Jan 15, 1970
@ 0800

2 numbers of spms
were discussed
by (Dexter) & JCA
therever no
decide, so'm
notched

1415 Veran off-site

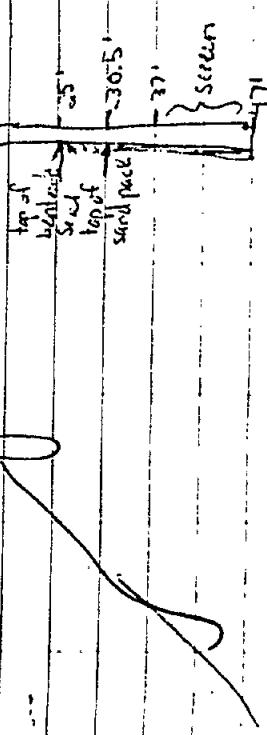
AR304059

151

Mondan January 15, 1970
0745 Veran on site Weston's D claim
is on site and the Surveyor
is on site. No other is on site
and ranner car off

0840 Drillers John Lester, + David Perez + Ver
on site setting up. D Cactus firms
Veran that the hole is open to
32 feet SD will be rebilled to
47 feet from initial 41 feet
hole place MW. a

0930 Drillers are beginning to drill down
holes are dressed in several cut
and cutting hard holes to 47 ft. Oil cutting
are planned to 55 gallon drum
1030 tools has been last enough
bed is being set to 47 feet
casing has been
cased in well



JCA

0840 Sand is being placed in the top
water sand is placed up.
30.5' foot below ground
120S Drillers begin to mix lime into sand
a sand over there sand pack

JCA

132 Monday January 15

- 12:30 The wages are pulled out and
~30 cans of beer are purchased
in the hotel (nothing is being
sold at the water)
- 12:45 Drillers stop for lunch and
put a bag of bacon in their
tote (one tie of sturdy seal)
up to 35 feet below the ground

14:00 Drillers mix cement in a 55 gallon
drum and pour cement directly
into hole. A total of 0.5 cu ft
bags of cement are used to
make 40 gallons of cement.
hole is cut to 10 feet
below surface. Drillers will
finish mixing tomorrow.

Offer this bag of cement
to the same spot location and
then leave for day

14:50 Weather off

9/1/53

Tuesday January 16

- D1-45 Jersac arrives on site. J. Cairns (Geologist)
and J. Juster, B. Biocell & J. Urban (GSA)
are ins'tr. D. Cairns, Geocry. L. Lubchuk
that all equipment and materials were
shipped yesterday. Today
they will be using boats on the
creek. This is a headland
which will help to keep the
boats from collapsing. Weather is
clear and in low 40's.
- 09:15 Drillers begin to set up for well #7
which is located above the headwaters
of Red Lion Creek at the top of a
slope into the wetlands. D. Cairns sets
up the devon line. The rig which is an
E7 Failing has descended and is now level with
the station. The base consists of a detergent
chamber, wash tub and a water line
tub, methanol and DI water
- D445 First sample is taken below mouth of creek
11:00-11:14 Sample 0-25' spouse. Hair
sample is put in a jar and the rest is
washed with NaOH & water, rinsed
in water, rinsed with DI water.

AP 304060

J. Cairns

5/9
5/9

154

Tuesday January 16

10:00 Drillers are building with ballbar. Some augers and aluminum drill cutters.

10:10 Sample is taken from 5 to 7 Blue units DNA reading

is Open. Hole reading is Open.

Sample is light orange sand

10:20 Sample is taken from 10 to 12

Blue cutters 2 1/3 to 4 1/5 DNA reads Open

Hole reads Open. Sample is orange sand

10:30 Sample is taken from 15-17 ft.

Blue cutters 3 1/5 to 5. DNA reads 3 ppm

Hole reads Open. Sample is orange

sand. Loosely bonded sand.

10:37 Sample is taken from 20-22 ft.

Blue units 6 1/5 to 8. DNA reads 4 ppm

Hole reads Open. Sample is orange sand

10:47 Sample is taken from 25-27 ft.

Blue units 16 1/10. DNA reads 0 ppm

Hole reads Open. Sample is loose

orange sand.

11:00 Sample is taken from 30-32 ft.

Blue units 9 1/10 to 11. DNA reads Open

Hole reads Open. Sample is med. light

orange sand.

11:5 Sample is taken from 35-37 ft. Blue units 11 1/8.

DNA reads Open. Hole reads Open. Sample is

orange sand.

Tuesday January 16

Note: Weston wears PVC gloves type, boots, and

dark hot fur. All sampling drillers in hard hats

and Saranex suit + rubber boots + golves

11:30 Sample is taken from 40-42 ft. Blue cutters

DNA reads 1 ppm. Holes reads 0 ppm

Sample is light orange sand. Most at the top

Bob Touhey is on site

Never levels 4 1/2 feet below ground

surface.

11:45 Sample taken from 45-47 feet. Blue cutters 16 1/2

DNA reads 2 1/2 ppm. Holes reads Open

Sample is orange brown and wet

12:00 Sample taken from 50-52 ft. Blue cutters 16 1/2

DNA reads 3 1/2 ppm. Holes reads 30 ppm

Sample is orange sand with small black sand

layers.

Drillers are now taking continuous samples

new until they reach

12:15 Sample taken from 52-54. Blue units 6 1/9 to 1/5

DNA reads 300 ppm. Holes reads 100 ppm

Sample is light orange sand

12:45 Sample taken from 56-58 ft. Blue units 6 1/11 to 1/11

DNA reads 250 ppm. Holes reads 100 ppm

Sample is yellowish sand

11:5 Sample is taken from 56-58 ft. Blue units 6 1/11 to 1/11

DNA reads 250 ppm. Holes reads 50 ppm

Sample is yellowish sand

8:50 Tuesday January 16

12:55 Sample taken from 58-60 ft. Bluest. 7/7/414.

Clay is reached at 58.9 ft Patomac.

DNA reading is 100 ppm. Haux is 50 ppm.

Sample is orangy sand at top and

dark gray clay at bottom.

13:00 Drillers go to Bob's Technology office. Weather is sunny 15°C.

14:00 Drillers return from lunch and prepare for well test

the casing is steamed and the screen is cleaned

15:45 D. Gains informs Versar that 1 sample

from each well will be submitted to Standard Chlorine's lab; this will be the most

contaminated sample sand for each well

15:50 Drillers are finished in the hole and will

take one more sample from 60-62ft.

16:00 Drillers take sample 60-62. Hole reads 7 ft

Sample is very sandy clay with some

fine sand or silt. The screen will be

set at 58.1 dollars. D. Gains, + L. Wulff agree that it

will be acceptable to stream usage in advance and

wrap it in plastic in the future in order to

improve efficiency

16:20 Drill set screen which is stainless steel

4" diameter - 10' long - and casing 5" dia

16.45 Dollars. Take a 5 foot section of tubing from

top to four scf

157

Casing is 2.8" above ground.
17:45 Drillers still passing sand.

18:00 Sand pack is measured to be 41.61

below ground surface. Drillers pack up
soil the right. A total of 500 lbs. of sand are used.

18:15 Drillers + Versar offsite

19:00 Drillers return from lunch and prepare for well test

the casing is steamed and the screen is cleaned

Standard Chlorine's lab; this will be the most

contaminated sample sand for each well

15:50 Drillers are finished in the hole and will

take one more sample from 60-62ft.

16:00 Drillers take sample 60-62. Hole reads 7 ft

Sample is very sandy clay with some

fine sand or silt. The screen will be

set at 58.1 dollars. D. Gains, + L. Wulff agree that it

will be acceptable to stream usage in advance and

wrap it in plastic in the future in order to

improve efficiency

16:20 Drill set screen which is stainless steel

4" diameter - 10' long - and casing 5" dia

16.45 Dollars. Take a 5 foot section of tubing from

top to four scf

158

CURVE TABLES

HOW TO USE CURVE TABLES

Table I. contains Tangents and Externals to a 1° curve. Tan. and Ext. to any other radius may be found nearly enough, by dividing the Tan. or Ext. opposite the given Central Angle by the given degree of curve.

To find Deg. of Curve, having the Central Angle and Tangent:
Divide Tan. opposite the given Central Angle by the given Tangent.

To find Deg. of Curve, having the Central Angle and External:
Divide Ext. opposite the given Central Angle by the given External.

To find Nat. Tan. and Nat. Ex. Sec. for any angle by Table I.: Tan. or Ext. of twice the given angle divided by the radius of a 1° curve will give the Nat. Tan. or Nat. Ex. Sec.

EXAMPLE

Wanted a Curve with an Ext. of about 12 ft. Angle of Intersection or I. P. = $23^\circ 20'$ to the R. at Station 542+72.

Ext. in Tab. I opposite $23^\circ 20' = 120.87$
 $120.87 \div 12 = 10.07$. Say a 10° Curve.

Tan. in Tab. I opp. $23^\circ 20' = 1183.1$

$$1183.1 \div 10 = 118.31.$$

Correction for A. $23^\circ 20'$ for a 10° Cur. = 0.16
 $118.31 + 0.16 = 118.47$ = corrected Tangent.
 (If corrected Ext. is required find in same way)

$$\text{Ang. } 23^\circ 20' = 23.33^\circ \div 10 = 2.3333 = \text{L.C.}$$

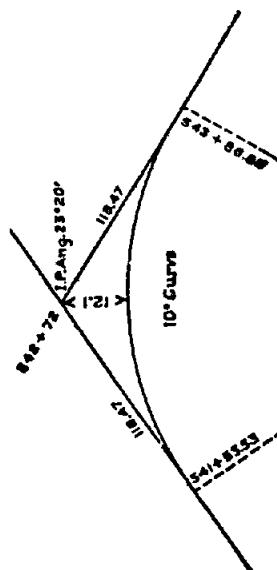
	I.P. = sta.	542	542 + 72
Tan. =	+50		1.18.47
543			
B. C. = sta.		541 + 53.53	
+50			
543 +		2.33.33	
86.86	E. C. = Sta.		
		543 + 86.86	

$$100 - 53.53 = 46.47 \times 3' (\text{def. for 1 ft. of } 10^\circ \text{ Cur.}) = 139.41' =$$

$$2^\circ 19\frac{1}{2}' = \text{def. for sta. 542.}$$

$$\text{Def. for 50 ft.} = 2^\circ 30' \text{ for a } 10^\circ \text{ Curve.}$$

$$\text{Def. for 36.86 ft.} = 1^\circ 50\frac{1}{2}' \text{ for a } 10^\circ \text{ Curve.}$$



MW.7

AR304062

(2)

JANUARY 19, 1990

(3)

The Following Shipment was reported
to Sase at Smc on 1/11/90.

Case # 13445

Date Shipped: 1/10/90

ORGANIC

Lab: RECMD

- 1 Sol, Low, Full Scan
- 1 Sol, Low, Brn/vra only
- 1 Ag, Low, Full Scan
- 1 Ag, Low, Van only

Fed Ex # 4575149806

IN ORGANIC

Lab: JTC

- 1 Sol, Low, Metal & Cyn.
- 1 Ag, Low, Metal & Cyn

Fed Ex # 4575149810

SAS # 5165 C. TASK 1

Lab: LANGST

- 2 Sol, Low, Nitrobenzene, metachloronitrobenzene
- 1 Ag, Low, "

Fed Ex. 4575149832

205

AR304064

DS

(4)

SAS # 5165C - TASK 2

LAB: PAC&C

2 Sol, low TRI - Hexachlorobenzene.

1 API, low,

Fed Ex 4575149821

The Following Shipment was reported
TO SARAH AT SHNO on 1/17/90

SAS # 5165C - TASK 4

DATE Shipped : 1/16/90

LAB: ATEC

7 Sol, low, grain size

Fed Ex. 4575149795

(5)

Summary of Samples Collected from
1/9/90 to 1/10/90.

VESSAC#	WESTON#	IR	OTR	SAS NO: 5165C-
CB-1	SB-3-7-1	MCFC 04	CZ 4/12	09
CB-2	SB-4-5-1	-	CBF 85	11
EGB-3	SB-1-1-3	MCFC 4/4	CBF 83	10
TB-27	-	-	CBF 81	-

AS

AR304065

AS

⑨ 8:00

January 23, 1990

0745 L. Lubice on site. Weather is clear - low 40's.
08:00 D. Cairns on site (Western), and SCA on site.

D. Cairns informs L. Lubice of past activities. The well will not be completed however since there have been delays due to equipment problems. There has also been a delay because Western has requested that JCF use a different type casing without couplings to be welded together instead. The issue with couplings presents too many problems when trying to terminate and grout down the borehole.

08:15 Drillers are setting up for the day and D. Cairns arrives back to monitor gate key.

08:20 D. Cairns on site

08:40 Drillers begin drilling. They are at 44 feet just above the water table.

January 23, 1990

The water table is a 43 and the clay was hit at 62 approx so the water table is 20 - 25 ft thick. Weston is planning to set the casing at 67 ft.

09:27 Drillers are setting casing at 67.5 ft. and will run 30' of steel. There is 1-10 foot stainless steel screen 2 - 20 foot s.s. casing sections 1 - 18 foot s.s. casing of which casing sticks two feet off the ground.

10:45 Drillers are beginning to place sand pack by pumping sand between well casing and annulus using motor to avoid breaking sand pack is measured to be 50' (500 lbs.)

11:50 Drillers put a 1/2" tip of template pipe down hole (it坐s in flastic paragraph already sterilized)

12:00 Drillers break for lunch

13:00 Driller return to work and pump 355 gallons of bentonite slurry by a PVC trencher tip

BR304066

(8)

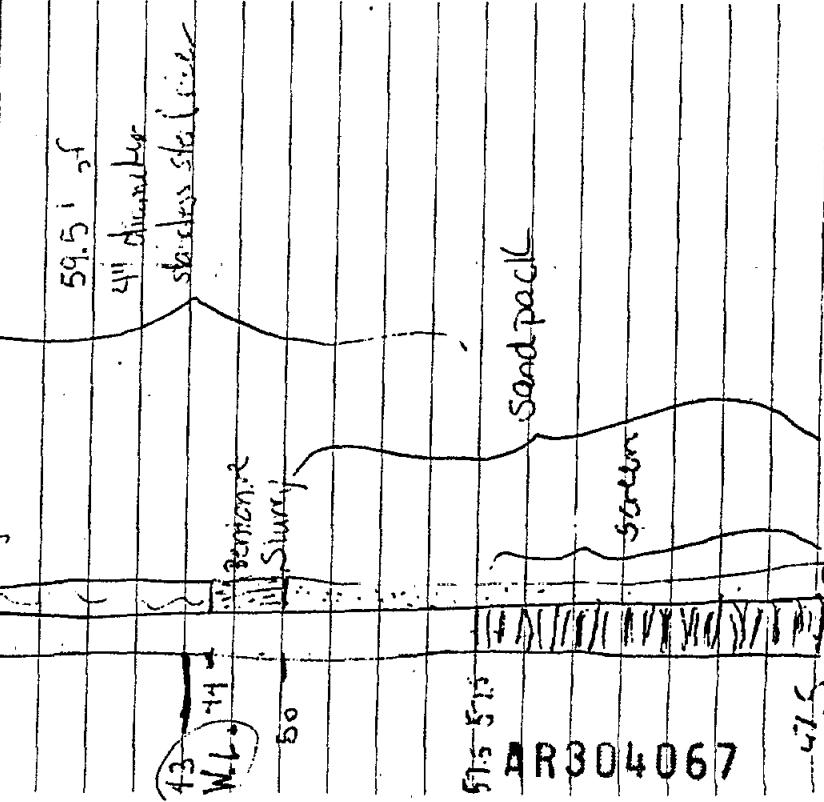
W.M. - 6
65

January 23 1990

150 (54)
150

Note: Drillers are in Savanx cathedral gloves, boot & hard hats, and when mixing cement, drillers wear masks.

1340 Drillers pull some auger + begin mixing cement. A total of 90 cubic ft of cement is being pump down around the casing by pump truck.



R304067

47.5

50'

57.5

43

50'

59.5' 11"

4" diameter

stainless steel liner

W.L.

43

50

57.5

59.5

drillers working

1505 Version off site

1500 Drillers have used another 35 gallons of cement + adding more cement

1530 Drillers have used another 35 gallons of cement + adding more cement

is up to 3 feet below ground surface

1500 Drillers are cleaning up + preparing for next hole. All cuttings have been disposed of

10. 24

January 24, 1990.

08:00 Verser on site D Cairns (Weston)
is on site and drillers from JCA
are on site

Weather is overcast and high 40's,
medium humidity.

Drillers are setting up for the day
at the location for Holes-B which
is behind the trailer adjacent to
the soil piles from the spill excavation
at the edge of the bank into the
wetlands. Drillers steam cleaned
equipment last night but the finish is
up the resource section cleaning aquifers

10:00 Drillers have broken and line 10
split sample is taken from D-2 foot
true and DRA lead Open
Verser & Weston and working impossibly
metaphor due to the humidity

John (JCA) asserts that the big
was steam cleaned last night at the
aquifers were cleaned this morning
D Cairns (Weston) has set up a dewatering
consisting of a different wash, water rinse,
methanol rinse, and D1 water rinse
D Cairns breaks each spoon drawing it is dry

January 24, 1990

before and after methanol rinse
1010 Split sample from 58-10
feet is taken. DRA reading
is -Open sample is orange-brown coarse
sand. OIA in breathing space is 3-4 ppm fluctuating
from due to Evans off 13-15 feet
split sample from 18-20 feet is Open.

1020 Split sample from 18-20 feet is taken. OIA
reading is Open and DRA reading is
Open. Weston's Hm & Verser appear to
be working properly again. Sample is
orange-brown coarse sand.

1035 Split sample from 18-20 feet is taken.
OIA reading is Open and
Hm reading is Open.
Sample is light orange and light blue
sand with a decreasingly organic
from surface to bottom well sorted
Hm in breathing zone is Open

1050 All cuttings are being drummed by
JCA the drillers have put plywood
ground bore hole to ensure that all
cuttings are drummed
Split sample from 23-25 feet is taken
OIA is 1.5 ppm Hm is zero ppm. Sample
is light orange sand turns to mid-yellow
scrubbed. Hole in breath is Open.

AR304068

(13) Jan 24, 1990.

11.04 Split spoons taken up to Hru point have all been dry. Weston is taking a pac of soil sample from each spoon. Percentage of the well the highest ppm sample will be given to SCD's lab for analysis and the rest will be discarded.

11.05 Split spoon is taken from 28-30 feet.

OVA is 17pm. Hru is Open.

The OVA is still fluctuating between 3-4 in the air. The Hru in the breathing zone is Open

The sample is orange sand coarse

to medium, well sorted and dry

OVA reading is 1 ppm. Hru reading is 1 ppm.

Sample is just above water level since bottom 2 inches are wet. Sample is orangy sand. medium to coarse grain.

11.25 Split spoon is taken from 38-40 ft. Sample is wet. Water level is between 36-37 feet. OVA reading is 1 ppm. Sample is brown orange silt, sand. Sp.

(13)

Jan 24, 1990

11.35 Drillers break for lunch (they are breaking now because once they are drilling into the water saturated zone they don't want to stop.)

Note: for all spoons Weston pulls the remaining sample in durans. Washes spoon w/ Alcohol and water. rinses spoon w/ water, allows spoon to dry. scrubs spoon with methanol, allows spoon to dry. Wets spoon with DI water. bath fingers spoon with DI water.

Weston is in Level D - tyvek, rubber boots, gloves and hard hat for all sampling.

12.30 Drillers return to work and continue sampling

12.50 Split spoon is taken from < 3-4.5 feet.

OVA reading is 1 ppm. Hru reading is 1 ppm. Drill a breath hole zone is 2-3 ppm (depth from top) Hru is 0 ppm in breathing zone.

Note all Hru recordings are double checked with Versar's Hru. Sample is mud - fine orange sand.

AR304069

(14) 24 Jan 1990

13:05 Sample split spoon is taken from 48-50 ft.
OIA reads 6 ppm. Hole reads Open.
(Note: D. Cairns remarks that the lack of
contamination could be due to the rotary
well which pumps 30 gallons/min.)
sample is orange brown sand and wet.

13:15 Split spoon is taken from 53-55 feet
OVA reading is 8 ppm. Hole reads Open
Sample is tan orange brown sand and wet.
40-51 feet

13:30 Split spoon is taken from 58-60 feet
OIA reading is 11 ppm. Hole reads Open
Sample is red wet and orange brown
soil clay layer begins at 50 feet.

13:40 Split spoon is taken from 51-53 feet
OIA reading is 9 ppm. Hole reads Open
Sample is orange & brown clay

13:50 Split spoon is taken from 53-55 feet
R 304070 OVA reading is 8 ppm. Hole reads Open
Sample is brown clay at top and
dk. gray clay in middle & brown mud
at bottom

dd. (5)

January 24, 1990

14:00 P. Cairns has instructed drillers to set
the screen a 51 feet where the clay
layer begins. Drillers leave to pick
up the casing and screen which has
already been cleaned (filtering
to the drillers).

14:30 Drillers return and begin to set Casing
and screen. The casing is screwed into
the screen (a 20 foot section of casing &
10 foot section of screen).

15:00 Another 20 foot section of casing is
welded to the 20 foot section already
in hole

15:50 An additional 3 feet section is
welded onto the top of casing in
hole.

16:00 Augers are pulled and the screen
is set at 52 feet so drillers pull
a bag (100 lbs) of sand down b/w. Casing
& augers and then lift the filter up
one foot so the well screen is now
set at 51 feet.

(1)

MW-8

8) (17)

January 24, 1960

1650 Drillers have placed a sand pack up to 35 feet and are cleaning up for the day (4 bags of sand were used - 400 lbs.)

1100 Drillers are still placing sand pack

1715 Sand pack is measured to be 25' in below surface. It is getting dark so drillers are cleaning up for the day and will begin plastering bentonite seal tomorrow.

1730 Visor offsite.

bentonite slurry

35-

WL 35

4

short pack

screen .020 slst 52

51

R304071

(18) January 25, 1990

07:45 Verson the drilling rig
and pouring down rain. Drillers (RA)
and D. Cavers (Weston)
are on site. Drillers are settling
up for day.

08:30 Drillers place PVC tremie pipe
down hole which they assert was
seam cleaned. The bentonite
slurry is mixed and 30 gal
are pumped down the hole
as a bentonite seal.

10:00 Drillers begin to mix grout
with cement and water.
Drillers wear masks while
mixing grout.

10:30 Drillers begin to pump grout
down hole

12:30 Drillers have pumped 120 gallons
of grout down hole and grout
reaches surface. It is still raining
heavily and drillers begin to cleanup
for day.

January 25, 1990

Drillers assure Verson the drilling rig
is secure, rods, casing, + screen will all be
cleaned before the next holes drilling
begins

1240 Drillers are grouting for the day due
to rain. D. Caver claims L. Bishop
that they will be working on Saturday
Verson off site

(19)

Drillers assure Verson the drilling rig
is secure, rods, casing, + screen will all be
cleaned before the next holes drilling
begins

1240 Drillers are grouting for the day due
to rain. D. Caver claims L. Bishop
that they will be working on Saturday
Verson off site

AR304072

20

0745 Venturini arrives on site. Weather is overcast.
low 40's.

0810 Western L. boulders on site.

0830 Drillers arrive on site. Tie in final grouting for MW-3. Tie in sand pack seal boulders have already been placed. Today, drillers will finish well and install all units more or less at same height. Tests are here but test is not (XG).

0845 Drillers begin to fill water tank. L. Lassalle arrives to inspect site. Drill was drilled to 65 ft. Tie off was set at 64 ft. A sand pack was placed from 64 ft to 65 ft. Appoximately 30 gallons of sand were pumped down hole by pump truck to twin API-X. A fine sand seal.

0915 Drillers measure borehole. Seal extends to 44 ft below open surface. This began to rise but did not reach

304073

Monday January 29, 1960
0940 Drillers are mixing grout

0950 Drillers begin to place grout in hole
by PVC flexible pipe.

1015 Drillers have pulled all the grout.
and have placed 60 gallons of cement grout. The core now cleaned up the area and preparing to move the rig. 1016 still need to move the rig across 1015 ground right now. ready to repeat 1015 below surface.

1100 Drillers move rig and mix grout to fresh grading of site. Drillers pour 45 more gallons of grout down hole.

1115 Drillers mix another 35 gallons of grout and pour in down hole. Site is total of 170 gallons of grout has been used. A health & safety officer from SCD is on site and informs Lynn Lassalle that all personnel on site should wear safety glasses. On site Lynn Lassalle asks if there is any further work.

(13)

4 ft screen

64 ft

5 ft - 3 ft width

current
grout
steel 4" diameter
size
stain less

AN 395

bentonite
slurry

49

sand
pack

screen

AR304074

64 ft

(13)

Monday January 29 1973

Sold glass in afternoon to Ward, hats and
dishes also beer cans & small glasses
and bottles.

11:30 Creek 15' up to 5' sand bedrock
Sun Street Dillers out now painting
pump & house. Bob Tandy is on site.
Talk with Lynn Lawlor

12:00 Dillers break for lunch. It's beginning
to rain lightly
13:00 Dillers return from lunch. John in
office. Lynn wife still caring for mark
off.

14:00 Dillers move equipment to location
of well #1. Weston is still in
the large room. Lynn is no longer
there. Dillers are placed on
the ground as floor.

Wall tiles are placed
on plastic sheeting.
Weston is dressed in
Tyvek, looks like a doctor
Safety glasses
Hand tools. Weston sets up a dozen
large tubs first which have, methanol
Soyap + DI spray.

(13)

(4) Monday January 29, 1990

14:30 Split spoon. Ova is closed.
Hole leading is C full reading 1.44
All ova rings are being demand

14:45 Split spoon. ~~15:00~~ 15:00 I think
Ova reading is Open is still closing
in each of the

Note: All angles were taken aligned
line in this set signs changed.
Watch down each split spoon
after taking reading + sample
is closed - so OVA

15:05 Split spoon is taken from 13-15
liva reading is open

15:15 Split spoon is taken from 13-15
OVA is firm all outline are
high demand

15:30 Split spoon is taken from 13-15
OVA reading is open

15:45 OVA : specimen taken from 29-30
OVA is Open

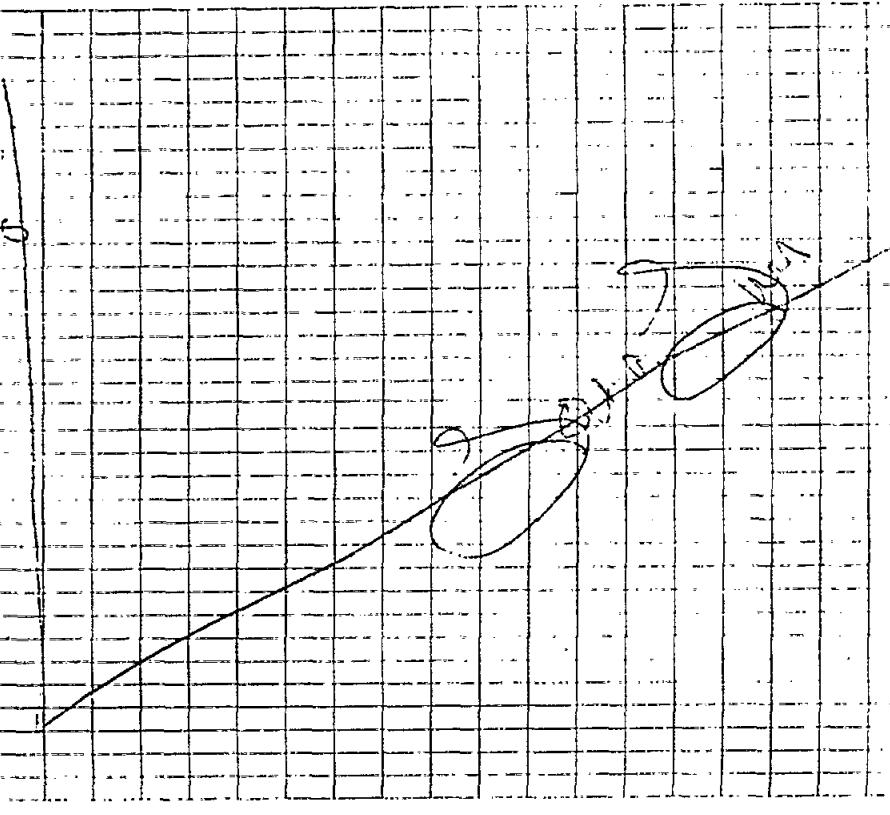
16:05 Split spoon is 33-35 mm is taken
OVA reads 1 from

40.75

(5) Monday January 29, 1990

14:30 Bill's take spot: remain: remain
leave site lac dry

14:30 Versus offsite. Six day



(1)

Tuesday January 30, 1990
0750 Versar on site. D. Cains (Weston)
is on site and driller, John,
Dave and John are on site.
Weather is sunny, 40°s and very
windy.

08:30 Drillers are filling water truck and
setting up. D. Cains' selfcores
the down line for split spoon
0845 Drilling commences.

09:00 Split spoon from 38-46 ft.
OFA reading is 0 ppm. (bottom)
Bottom is 100% sand.

0930 Split spoon from 43-45 ft.
The sample is wet water lens
is assumed to be 41 ft below
surface OFA reading is 150 ppm.
Hour is 0 ppm (prob due to no
moisture at the sample.)

Weston takes extra samples.
K. Hansen is to speak with D. Cains
about the sample.

AR304076

(2)

Tuesday January 30, 1990

0930 Split spoon from 46-53 ft is taken.
is 250 ppm.
Weston takes extra samples.

0945 Split spoon from 53-55 ft is taken.
OFA reading is 80 ppm.
All cuttings are being dimensioned.

10:00 Split spoon from 59-COF is taken.
OFA reading is 40 ppm.

1030 Split spoon from 63-COF is taken.
OFA reading is 0 ppm. (bottom tank)
Sample is 100% gravel and water.

1050 Split spoon from 66-COF is taken.
OFA reading is 30 ppm.
Sample is 100% gravel and water.

1100 D. Cains is seen. He says that
the samples given to SCD for analysis
(sample from 40 ft) will have been for
K. Hansen's test speech with D. Cains.

He says he will take another sample.

②

January 30, 1990

11:00 Drillers break in shaft with rock
casing.

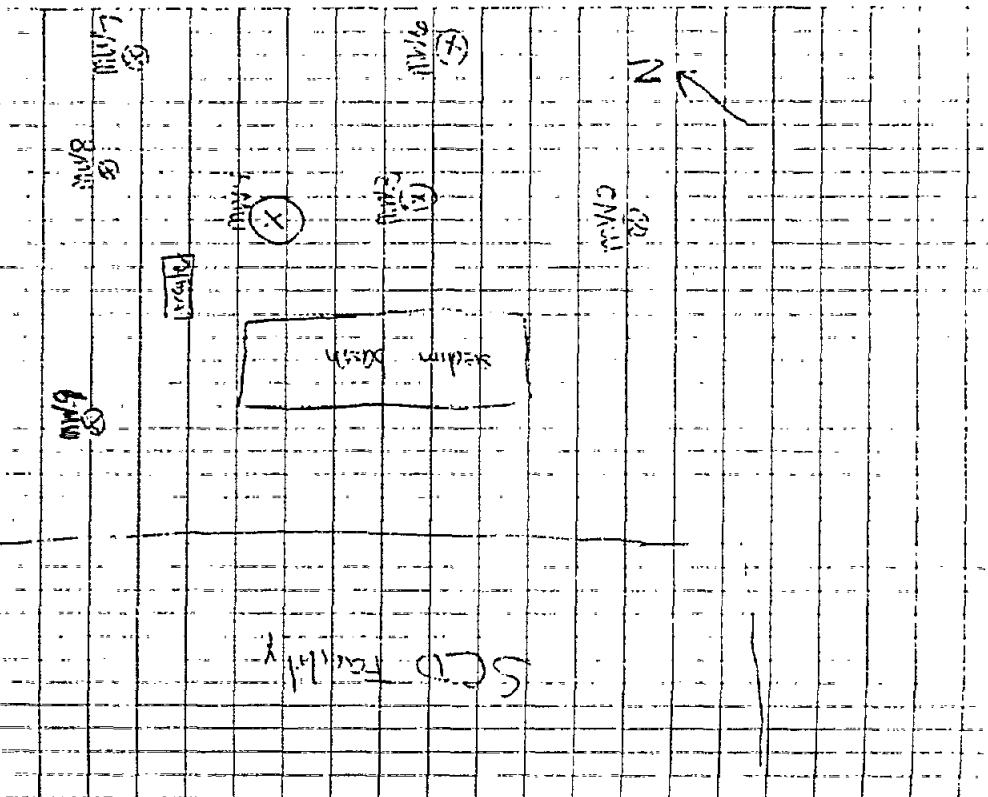
Site map with well locations

③

11:45 Drillers return to work and prepare
to set the casing. D. Cairns instructs
them to set the casing at 63 ft.

12:00 Drillers start setting.

Note MW3 is located between
recency wells on the east
side of sedimentation train



1:45 Riser pipe length where ground is
assured and elevation determined
to be set at 63 ft.

13:00 D. Cairns begins to place sand. Water is from a float valve which
sand pump bypass piping. Sand
pump is situated directly above
PVC trench (was this not supposed
closed bottomed at 63'). D. Cairns begins
site to fax me information.

AR304077

13:00 D. Cairns releases water

(3) MW3

Tuesday January 30, 1990

1345 In sand pack buried to be 49 ft below
ground level. 400 lbs of sand were laid.

No. 1 cement bentonite acut drill bits
used. 5 in. dia. 1 in. wall 20 ft long

bentonite. The tremie pipe was laid down after
drill used. This is mentioned to D. Cains will be used
on my well.

1430 Drillers along 35 gal. hrs of bentonite
used. Hole was 5 in. dia. Drillers are
going to set the tremie pipe after
drill used. The cement in the
well will be off the already installed
well.

1430 Drillers are going to cap
the well and now 8
in. dia. and 20 ft
long to set the tremie pipe
and the cement in the
well will be off the already installed
well.

riser pad

55 ft
4" diam.
stainless steel
water tight
4 ft
44 ft
48 ft

bentonite seal

5 ft

1535 Versus off.

1500 Bob Taylor (SCD) is on site
to talk to D. Cains

6.25 in. size
4 ft well
6.5 ft

AR304078

(3)

(3) Wednesday January 21, 1962

C2-06. Lessor on site for due Westons
D. Cairns is on site & will be
John Dowse & John Freeman left
Site in late afternoon is subnormal
Walls 30's to Kevin Thorne, from Hydro 15m
site recessing, drilling of a regular hole
08:30 Drillers have prepared 4D profiles &
gravel down hole in kitchen
and began to mix cement

08:45 Drillers have prepared 4D profiles &
gravel down hole in kitchen
09:30 Drillers are mixing cement

10:10 All mixes have been mixed and
drillers are ready to start
1st hole is about 10' deep
Notes: Drillers are a service outfit
hard hats given to each basis

10:15 A total of 100' spud length of 10' cut
out (2' length in 10') was broken through
down the hole - by - when it got
from 2' down the hole found that it was stuck
below

Wednesday, January 21, 1962.

- 11:00 Drillers are getting up and out
of the hole
11:30 Drillers are getting up and out
of the hole
12:00 Drillers are getting up and out
of the hole
13:00 Drillers are getting up and out
of the hole
14:00 Drillers are getting up and out
of the hole
14:15 Drillers are getting up and out
of the hole
14:30 Drillers are getting up and out
of the hole
14:40 Drillers are getting up and out
of the hole
Note: All cuttings are being dumped

AR30407

(3) 36

Wednesday, January 3, 1964
1500 Soil sample taken 25' 25' is taken.
CIA recording Ciffins.

15:00 Soil sample taken 28' 30' is taken.
CIA recording is off - 5 ppm Hg

15:15 Soil sample taken from 35' 35' ft.
CIA reading is 5 ppm Open
out cutting one being changed

15:45 Soil sample taken from 38' 40' ft.
Soil is raised back water level has
not quite been reached. CIA record
is - 1 ppm

15:50 Drills are quitting for day.

16:00 Gear off site

AR304080

ATTACHMENT 2

Copies of CLP Paperwork

AR304081

EPA SAMPLE SHIPPING LOG FOR ALL SAMPLES SENT THROUGH THE CONTRACT LAB PROGRAM (12/85 version)

page 1 of 1CASE # 13413 SAS# 507SITE NAME: 507
SAS REQUEST: (details required)Site Leader: DAVID SCIENCE
Phone: (202) 241-2451EPA Project Officer: Bob Gianni

QC SAMPLE INFO AND/OR COMMENTS	CONC. (low/med/high)	SAMPLE PHASE (aq/soil)	TYPE	SAMPLE TRAFFIC REPORT org, d10 inor, SAS	LAB NAME	DATE SHIPPED	ORGANICS OR INORGANICS			SAS REQUEST (itemize)	LAB NAME	DATE SHIPPED	DATA REC'D
							XX	out items not requested	DATA RECEIVED				
							VOA	BNA	PEST	TCDD	METALS	CN	
MS/MS	low	soil	org	REF 72	REM 10	11/5/90			X	X	X	X	
Dun & Martin	1	1	1	REF 73					X	X	X	X	
				REF 74					X	X	X	X	
				REF 75					X	V	X	X	
				REF 76					X	V	X	X	
				REF 77					X	V	X	X	
				REF 78					X	V	X	X	
				REF 79					X	V	X	X	
EQ BLANK	AG	1	1	REF 80					X	V	X	X	
TRD BLANK	1	1	1	REF 80					X	V	X	X	
				REF 81	NOR	11/6/90			X	X	X	X	
				↓	! MCR 82				X	X	X	X	
EQ BLANK	1	1	1	REF 82					↓	X	X	X	
				REF 83					X	X	X	X	

AR304082

page 1 of 1 EPA SAMPLE SHIPPING LOG FOR ALL SAMPLES SENT THROUGH THE CONTRACT LAB PROGRAM (12/85 version)

CASE #

SAS#
SUSG-TASK# SITE NAME: STANFORD CHLORINE

Site Leader: DAVID STEVENS EPA Project Officer: Bob GARN.

Phone: (415) 741-4211

① with checkmarks
in each line, troubleshoot

QC SAMPLE INFO AND/OR COMMENTS	CONC. (low/ med/ high)	SAMPLE PHASE (aq/ sol)	TYPE REQUEST ORG. DTG REPORT INORG. NUMBER SAS	ORGANICS OR INORGANICS			DATA RECEIVED XX OUT ITEMS NOT REQUESTED VOA BNA PEST TCDD METALS CN	LAB NAME	REQUEST (itemize)	SAS REC'D
				LAB NAME	DATE SHIPPED	DATE				
NO. 100	Leu	Soil	SAS	Siemens				Lambert	①	1/5/86
Dsp of S16SC-01				-C2						
				-C3						
				-C4						
				-C5						
				-C6						
				-C7						
EQU. BULK	✓	AQ		✓ C.P.	✓					

Dsp

AR304083

page 1 of 1

EPA SAMPLE SHIPPING LOG FOR ALL SAMPLES SENT THROUGH THE CONTRACT LAB PROGRAM (12/85 version)

CASE# SAS1 SITE NAME: STANDARD CHEMICAL

Site Leader: David Stoenen
Phone: (212) 741-4211

EPA Project Officer: Bob Gagni

SAS REQUEST: (details required)

③ Trichloro, thru
Hexachloro Dextrane

QC SAMPLE INFO AND/OR COMMENTS	CONC. (low/med/high)	SAMPLE PHASE (aq/soil)	TYPE OF REQUEST (org, bio inor, SAS)	SAMPLE TRAFFIC REPORT NUMBER	LAB NAME	DATE SHIPPED	ORGANICS OR INORGANICS		XX out items not requested	DATA RECEIVED	SAS REQUEST (itemize)	LAB NAME	DATE SHIPPED	DATA REC'D
							BNA	PEST						
ms/msd	low	sol	Sas	Stoenen (MSD)										
D.P. S165C-1							-02							
							-03							
							-04							
							.05							
							-06							
							-07							
ED. BLANK	✓	AQ	✓				-08	✓						

AR304084

page 1 of 1

EPA SAMPLE SHIPPING LOG FOR ALL SAMPLES SENT THROUGH THE CONTRACT LAB PROGRAM (12/85 version)

CASE #

SAS# 5165C-TASK3 SITE NAME: STANDARD CHEMICAL

SAS REQUEST: (details required)
③ TANIC ORGANIC CARBON

Site Leader: David Spenger EPA Project Officer: Bob Gauthier

Phone: (215) 741-4211

QC SAMPLE INFO AND/OR COMMENTS	CONC. (low/ med/ high)	SAMPLE PHASE (aq/ sol)	TYPE REQUEST org, dtc Inor. SAS	SAMPLE TRAFFIC REPORT NUMBER	ORGANICS OR INORGANICS			DATA RECEIVED	XX out items not requested	DATE SHIPPED	SAS REQUEST (itemize)	DATE REC'D
					LAB NAME	DATE SHIPPED	VOA/BNA/PEST/TCDD/ METALS/CN					
MS/MSD	Lo.	SoL	SAS	5165C-T3PC	ARI	08-07-85		③	1/5/90			
DP. 5165C-C1				-C1								
				-C2								
				-C3								
				-C4								
				-C5								
				-C6								
				-C7								
Eq. Blank			AO					✓ -AO	✓			

AR304085

page 1 of 1

EPA SAMPLE SHIPPING LOG FOR ALL SAMPLES SENT THROUGH THE CONTRACT LAB PROGRAM (12/85 version)

CASE# SAS/SKSC-TASK3 SITE NAME: STAN-OIL CO INC

SAS REQUEST: (details required)

(3) Tons Organic Carbon

Site Leader: Dave Spernick Phone: (214) 741-4211

EPA Project Officer: Bob Gurni

QC SAMPLE INFO AND/OR COMMENTS	CONC. (low/ med/ high)	SAMPLE PHASE (aq/ sol)	TYPE REQUEST REPORT NUMBER	ORGANICS OR INORGANICS													
				SAS	LAB NAME	DATE SHIPPED	XX out	Items not requested									
							VOA		BNA	PEST	TCDD	METALS	CN	LAB NAME	SAS REQUEST (itemize)	DATE SHIPPED	DATA REC'D
ms/mSD	low	sol	SAS	SAS	Skelton									ART			
Dip. SKSC-C1				"C1				-03									
				-04													
				-05													
				-06													
				-07													
E.O. BLANK		AQ		↓				↓	↓	↓	↓						

Dip. SKSC-C1

AR304086

page 1 of 1 EPA SAMPLE SHIPPING LOG FOR ALL SAMPLES SENT THROUGH THE CONTRACT LAB PROGRAM (12/85 version)CASE# 13445 SASS# SITE NAME: STANARD CHLORINE

SAS REQUEST: (details required)

Site Leader: DAVID SPEAKER EPA Project Officer: Dob GossenPhone: (315) 741-4211

QC SAMPLE INFO AND/OR COMMENTS	CONC. SAMPLE INFO AND/OR COMMENTS	TYPE (aq/ sol) and soil)	SAMPLE REQUEST NUMBER SAS	ORGANICS OR INORGANICS				LAB NAME	DATE SHIPPED	XX out ITEMS NOT REQUESTED	SAS REQUEST (itemize)	LAB NAME	DATE SHIPPED	DATA REC'D
				LAB NAME	DATE SHIPPED	VOA	BNA							
low	Soil	org	CZ 412	RECMD	11/10/90			X		X				
	SOL		CZF 85			X				X				
EQ. BLANK		Aq	CZF 83			X				X				
TERP BLANK	✓	Aq	✓	CZF 81	✓	X				X				
low	Soil	Environ	MCCR 04	JTC	11/10/90	X		X		X				
EQ. BLANK	✓	Aq	↓	MCCR 04	↓	X		X		X				

AR304087

page 1 of 1

EPA SAMPLE SHIPPING LOG FOR ALL SAMPLES SENT THROUGH THE CONTRACT LAB PROGRAM (12/85 version)

CASE# SAS# SITE# SITE NAME: STANDARD CHLORINE

SITE LEADER: DAVID SPENCER EPA Project Officer: Bob Guagni

SAS REQUEST: (details required)

(1) Nitrobenzene

Methylbenzene, p-
t-cresol, m-cresol

QC SAMPLE INFO AND/OR COMMENTS	CONC. (low/ med/ high)	SAMPLE PHASE (aq/ soil)	TYPE	SAMPLE REQUEST ORG. DIO INORG. SAS	SAMPLE TRAFFIC REPORT NUMBER	LAB NAME	DATE SHIPPED	XX OUT ITEMS VOA	DATA RECEIVED	LAB NAME	SAS REQUEST (itemize)	DATE SHIPPED	DATA REC'D				
										ORGANICS	INORGANICS	DATA RECEIVED	LAB NAME	SAS REQUEST (itemize)	DATE SHIPPED	DATA REC'D	
EQ. BLANK						Lam	SCL	SAS	Success Task				LANGST	①	1/20/90		
							AQ		1-10								↓
								SCL	↓	1-11							↓

AR304088

EPA SAMPLE SHIPPING LOG FOR ALL SAMPLES SENT THROUGH THE CONTRACT LAB PROGRAM (12/85 version)

page 1 of 1CASE# SAS# 1145C-MASK 2 SITE NAME: STANDARD CHLORINE
SAS REQUEST: (details required)Site Leader: DAVID SPENCER EPA Project Officer: Bob Guarini
Phone: (212) 741-4211(2) TRI chloro - HClO
Hexachloro benzene

QC SAMPLE INFO AND/OR COMMENTS	CONC. SAMPLE PHASE (low/ med/ high)	TYPE OF SAMPLE REQUEST org, d/o Inor. SAS	SAMPLE TRAFFIC REPORT NUMBER	LAB NAME	DATE SHIPPED	XX VOA BMA	METALS	CN	LAB NAME	REQUEST (itemize)	DATE SHIPPED	DATE REC'D
EQ. Blank	Low	Sev	SAS	Siemens	7/10/90					DATA		
	AQ									RECEIVED		

↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
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AR304089

United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490



Organic Traffic Report
(For CLP Use Only)

1. Type of Activity (Check one)		2. Region Number		Sampling Co.		4. Date Shipped		5. Sample Description (Enter in Column A)	
<input type="checkbox"/> ENR	<input type="checkbox"/> REPD	<input type="checkbox"/> RA	<input type="checkbox"/> SI	<input type="checkbox"/> STSI	<input type="checkbox"/> SR	<input type="checkbox"/> RD	<input type="checkbox"/> PA	<input type="checkbox"/> PSES	<input type="checkbox"/> Other (Specify)
<input type="checkbox"/> ESR	<input type="checkbox"/> OSRM	<input type="checkbox"/> PA	<input type="checkbox"/> STPA						
Non-Superfund Program:									
Site Name		Site ID		Site Spill ID		5. Airbill Number		SAS No. (if applicable)	
SCD						15/90 457515051A		13413	
City, State Delaware City, Delaware						Carrier			
CLP Sample Number (From labels)		(A) Sample Descrip- tion (From box #)		(B) Concen- tration L=low M=med H=high		(C) RAS Analysis VOA BINA Pest/ PCB		(D) Special Handling	
CBF 72		5		L X X		Do M5/MSO		WS-1	
CBF 73		5		L X X				WS-2	
CBF 74		5		L X X				WS-3	
CBF 75		5		L X X				WS-4	
CBF 76		5		L X X				WS-5	
CBF 77		5		L X X				WS-6	
CBF 78		5		L X X				WS-7	
CBF 79		3		L X X		EG BLANK		EGB-2	
CBF 80		3		L X		TRIF BLANK		TRB-312	
See reverse for additional instructions.									
(E)		(F)		(G)					
Station		Date/Time of Sample Collection		Corresponding CLP Inorganic Sample Number					

AR30409



United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2490 FTS 557-2490

Organic Traffic Report (For CLP Use Only)

1. Type of Activity (Check one)				Case number		SAS No. (Leave blank)	
<input type="checkbox"/> ENF	<input checked="" type="checkbox"/> NPLD	<input type="checkbox"/> RA	<input type="checkbox"/> SI	<input type="checkbox"/> SRSI	<input type="checkbox"/> ST	<input type="checkbox"/> Other (Specify)	
<input type="checkbox"/> ER	<input type="checkbox"/> G&M	<input type="checkbox"/> RD	<input type="checkbox"/> PA	<input type="checkbox"/> X	<input type="checkbox"/> RIRS		
Non-Superfund Program							
Site Name S.C.D.		Site Spill ID		2. Region Number III		Sampling Co. Versar	
City, State Delaware City, DE		Sampler (Name) Tan Spohn		3. Ship To: Recra Environmental 8330 Guilford Road Building F Columbus, ND 31041-0100		4. Date Shipped 1/10/90	
CLP Sample Number (From labels)		(C) RAS Analysis L=low M=med H=high		5. Airbill Number 45751498010		5. Sample Description (Enter in Column A)	
(A) Sample Description (From box #)		VOA	BNA	Pest/PCB		(E) Station Location	(F) Date/Time of Sample Collection
CB-412		X	X	X		CB-1	1/10/90 10:20
CBF-25		X	X	X		CB-2	1/10/90 11:44
CBF-23		X	X	X	ES BLANK	EQB-3	1/9/90 11:10
CBF-81		X	X		TRIP BLANK	TA-27	1/9/90 07:30
ATTN: ARUN BHATTACHARJEE See reverse for additional instructions.							
Federal Express Triple volume required for matrix spike/duplicate aqueous sample. Ship medium and high concentration samples in paint cans.							
1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (SAS) 7. Waste (SAS) 8. Other (SAS) (Specify)							

AH304092



United States Environmental Protection Agency
Contract Laboratory Program Sample Management Office
PO Box 818 Alexandria, VA 22313
703-557-2900 FTS 557-2900

Inorganic Traffic Report (For CLP Use Only)

SAS No. (If applicable)

Case Number
13473

1. Type of Activity (Check one)				2. Region Number Sampling Co.				4. Date Shipped Airbill Number		5. Sample Description (Enter in Column A)		
<input type="checkbox"/> ENF	<input type="checkbox"/> NPLD	<input type="checkbox"/> RA	<input type="checkbox"/> STSI	<input type="checkbox"/> 3	<input type="checkbox"/> VPISSC	<input type="checkbox"/> 01/04/90	<input type="checkbox"/> 4575150506	1. Surface Water 2. Ground Water 3. Leachate 4. Rinsate 5. Soil/Sediment 6. Oil (SAS) 7. Waste (SAS) 8. Other (SAS) (Specify)				
<input type="checkbox"/> ERF	<input type="checkbox"/> OAM	<input type="checkbox"/> RD	<input type="checkbox"/> ST	<input type="checkbox"/> Other (Specify)	5. Sampler (Name) Dan FP SPENCER				6. Carrier <i>Fed EX.</i>			
Non-Superfund Program				3. Ship To: Silver Valley One Government Gulch Ketchum, ID 83837				Double volume required for matrix spike/duplicate aqueous sample. Ship medium and high concentration samples in paint cans.				
Site Name SCD				Site Spill ID Ames; Cellophane Brown				See reverse for additional instructions.				
City, State Delaware City, DE												
CLP Sample Number (From Labels)	(A) Sample Description (From box)	(B) Concentration L=low M=med H=high	(C) RAS Analysis	(D)	(E)	(F)	(G)					
			Total Metals	Cyanide	Special Handling	Station Location	Date/Time of Sample Collection	Corresponding Organic Sample Number				
MCCR 22	5	L	X	X	Do QC	WS-1	1/4/90 /1410	CBF 72				
MCCR 23	5	L	X	X		WS-2	1/4/90 /1410	CBF 73				
MCCR 24	3	L	X	X	EQ. Bulk	EQB-2	1/4/90 /0932	CBF 79				

AR304093

U.S. ENVIRONMENTAL PROTECTION AGENCY
 CLP Sample Management Office
 P.O. Box 818 - Alexandria, Virginia 22313
 Phone: 703/557-2490 - FTS/557-2490

SAS Number
 5165C-TASK 1

SPECIAL ANALYTICAL SERVICE
 PACKING LIST

Sampling Office: <u>Versar</u>	Sampling Date(s): <u>1/4/90- 1/5/90</u>	Ship To: <u>Langston</u> <u>2005 West 103rd TERRACE</u> <u>Lenwood, KS 66204</u> <u>(913) 341-7800</u>	For Lab Use Only Date Samples Rec'd: Received By:
Sampling Contact: <u>DAVID SPENCER</u> (name)	Date Shipped: <u>1/8/90</u>	Site Name/Code: <u>SCD</u>	Attn: Joyce L. Greene
(215) 741-4211 (phone)			

Sample Numbers	Sample Description i.e., Analysis, Matrix, Concentration			Sample Condition on Receipt at Lab
1. <u>5165C-01 TASK 1</u>	<u>Nitrobenzene, Methylchloronitrobenzene</u>	<u>, soil</u>	<u>, low</u>	
2. <u>5165C-02 TASK 1</u>				
3. <u>5165C-03 TASK 1</u>				
4. <u>5165C-04 TASK 1</u>				
5. <u>5165C-05 TASK 1</u>				
6. <u>5165C-06 TASK 1</u>				
7. <u>5165C-07 TASK 1</u>				
8. <u>5165C-08 TASK 1</u>				
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For Lab Use Only

White - SMO Copy, Yellow - Region Copy, Pink - Lab Copy for return to SMO, Gold - Lab Copy

AR304095

U.S. ENVIRONMENTAL PROTECTION AGENCY
CLP Sample Management Office
P.O. Box 818 - Alexandria, Virginia 22313
Phone: 703/557-2490 - FTS/557-2490

SAS Number

5145C-TASK 1

SPECIAL ANALYTICAL SERVICE
PACKING LIST

Sampling Office: <u>Versar</u>	Sampling Date(s): <u>1/9/90 - 1/10/90</u>	Ship To: <u>Langston</u> <u>2005 West 103rd Terrace</u> <u>Lakewood, KS 66226</u> <u>(913) 341-7800</u>	For Lab Use Only
Sampling Contact: <u>DAVIN SPENCER</u> (name)	Date Shipped: <u>1/10/90</u>	Site Name/Code: <u>JCD</u>	Date Samples Rec'd: _____
(620) 741-4211 (phone)		Attn: Joyce L. GREEN	Received By: _____

Sample Numbers	Sample Description i.e., Analysis, Matrix, Concentration	Sample Condition on Receipt at Lab
1. <u>5145C-07-TASK 1</u>	<u>nitrobenzene, metachloronitrobenzene, soil, 10:1</u>	_____
2. <u>5145C-10-TASK 1</u>	<u>↓</u>	<u>: AQ, ↓</u>
3. <u>5145C-11-TASK 1</u>	<u>↓</u>	<u>, soil, ↓</u>
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U.S. ENVIRONMENTAL PROTECTION AGENCY
CLP Sample Management Office
P.O. Box 818 - Alexandria, Virginia 22313
Phone: 703/557-2490 - FTS/557-2490

SAS Number
5165C-TASK 2

SPECIAL ANALYTICAL SERVICE
PACKING LIST

Sampling Office: <u>Versar</u>	Sampling Date(s): <u>1/4/90 - 1/5/90</u>	Ship To: PACE Laboratories, Inc. 1710 Douglas Drive North Minneapolis, MN 55422	For Lab Use Only
Sampling Contact: <u>DAVID SPENCER</u> (name)	Date Shipped: <u>1/8/90</u>	Site Name/Code: <u>SCD</u>	Date Samples Rec'd:
(215) 741-4211 (phone)		Attn: Lisa Leither	Received By:

Sample Numbers	Sample Description i.e., Analysis, Matrix, Concentration			Sample Condition on Receipt at Lab
1. <u>5165C-01 TASK 2</u>	<u>Tri- Hexachlorobenzene, Soil, Low</u>			
2. <u>5165C-02 TASK 2</u>				
3. <u>5165C-03 TASK 2</u>				
4. <u>5165C-04 TASK 2</u>				
5. <u>5165C-05 TASK 2</u>				
6. <u>5165C-06 TASK 2</u>				
7. <u>5165C-07 TASK 2</u>				
8. <u>5165C-08 TASK 2</u>				
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U.S. ENVIRONMENTAL PROTECTION AGENCY
CLP Sample Management Office
P.O. Box 818 - Alexandria, Virginia 22313
Phone: 703/557-2490 - FTS/557-2490

SAS Number

5145C-TASK2

SPECIAL ANALYTICAL SERVICE
PACKING LIST

Sampling Office: <u>Versar</u>	Sampling Date(s): <u>1/9/90 - 1/10/90</u>	Ship To: <p>PACE LABORATORIES, Inc 1710 Douglas Drive North Minneapolis, MN 55422 (612) 544-5543</p>	For Lab Use Only
Sampling Contact: <u>Davin Spencer</u> (name)	Date Shipped: <u>1/10/90</u>		Date Samples Rec'd: _____
(215) 741-4211 (phone)	Site Name/Code: <u>SCD</u>	Attn: LISA LEITNER	Received By: _____

Sample Numbers	Sample Description i.e., Analysis, Matrix, Concentration <small>Tri- through Hexa- chlorinated Benzenes, soil, low</small>	Sample Condition on Receipt at Lab
1. <u>5145C-09-TASK2</u>	↓ , AQ , ↓	_____
2. <u>5145C-10-TASK2</u>	↓ , soil , ↓	_____
3. <u>5145C-11-TASK2</u>		_____
4.		_____
5.		_____
6.		_____
7.		_____
8.		_____
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17.		_____
18.		_____
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AR304098

U.S. ENVIRONMENTAL PROTECTION AGENCY
CLP Sample Management Office
P.O. Box 818 - Alexandria, Virginia 22313
Phone: 703/557-2490 - FTS/557-2490

SAS Number
5165C-TASK 3

SPECIAL ANALYTICAL SERVICE
PACKING LIST

Sampling Office: <u>VERSAR</u>	Sampling Date(s): <u>1/4/90 - 1/5/90</u>	Ship To: <u>Analytical Resources, INC.</u> <u>333 Ninth Ave. North</u> <u>Seattle, WA. 98109-5187</u>	For Lab Use Only
Sampling Contact: <u>DAVID SPENCER</u> (name)	Date Shipped: <u>1/5/90</u>	Site Name/Code: <u>SCD</u>	Date Samples Rec'd: _____
(215) 741-4211 (phone)		Attn: Julie Viveiros	Received By: _____

Sample Numbers	Sample Description i.e., Analysis, Matrix, Concentration	Sample Condition on Receipt at Lab
1. <u>5165C-01 TASK3</u>	<u>TOC</u> , <u>Soil</u> , <u>Low</u>	_____
2. <u>5165C-02 TASK3</u>	_____	_____
3. <u>5165C-03 TASK3</u>	_____	_____
4. <u>5165C-04 TASK3</u>	_____	_____
5. <u>5165C-05 TASK3</u>	_____	_____
6. <u>5165C-06 TASK3</u>	_____	_____
7. <u>5165C-07 TASK3</u>	_____	_____
8. <u>5165C-08 TASK3</u>	<u>Water</u>	_____
9. _____	_____	_____
10. _____	_____	_____
11. _____	_____	_____
12. _____	_____	_____
13. _____	_____	_____
14. _____	_____	_____
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AR304099

U.S. ENVIRONMENTAL PROTECTION AGENCY
CLP Sample Management Office
O. Box 818 - Alexandria, Virginia 22313
Phone: 703/557-2490 - FTS/557-2490

SAS Number
5145C - TASK 4

SPECIAL ANALYTICAL SERVICE
PACKING LIST

Sampling Office: <u>Versar</u>	Sampling Date(s): <u>1/4/90 - 1/5/90</u>	Ship To: ATEC ASSOCIATES, INC. 5150 EAST 65th STREET INDIANAPOLIS, IN 46220	For Lab Use Only
Sampling Contact: <u>David Spencer</u> (name) <u>(215) 741-4211</u> (phone)	Date Shipped: <u>1/16/90</u>	Site Name/Code: <u>JCD</u>	Date Samples Rec'd: Received By:
Attn: Jim Shearer			

Sample Numbers	Sample Description i.e., Analysis, Matrix, Concentration		
1. <u>5145C-01 TASK 4</u>	<u>GRAIN SIZE, SOIL, LOW</u>		
2. <u>5145C-02 TASK 4</u>			
3. <u>5145C-03 TASK 4</u>			
4. <u>5145C-04 TASK 4</u>			
5. <u>5145C-05 TASK 4</u>			
6. <u>5145C-06 TASK 4</u>			
7. <u>5145C-07 TASK 4</u>			
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For Lab Use Only

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AR304100

REGI - 3 841 Chestnut St.
Philadelphia, Pennsylvania 19107

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME CO3041 Sang. 8	REMARKS							
		STA. NO.	DATE	TIME	COM ^P	GRAB	STATION LOCATION	NO. OF CONTAINERS	Tags No's
<i>J.R. Srodn</i>									
CBE-72	1/14/91	4:10	X	WES-1			4	3	-
CBE-73	1/14/91	4:12	X	WES-2			4	3	-
CBE-74	1/14/91	4:15	X	WES-3			4	3	-
CBE-75	1/14/91	4:19	X	WES-4			4	3	-
CBE-76	1/15/91	12:18	X	WES-5			4	3	-
CBE-77	1/15/91	10:42	X	WES-6			4	3	-
CBE-78	1/15/91	13:50	X	WES-7			4	3	-
CBE-79	1/14/91	09:30	X	EGB-2			12	2	4
CBE-80	1/14/91	07:30	X	TB-210			2	2	-
Relinquished by: (Signature) <i>J.R. Srodn</i> Date / Time Received by: (Signature)									
Relinquished by: (Signature) <i>J.R. Srodn</i> Date / Time Received by: (Signature)									
Relinquished by: (Signature) <i>J.R. Srodn</i> Date / Time Received for Laboratory by: (Signature)									
Remarks Shipped via FEDERAL EXPRESS AIR MAIL, No. 4575150510									
Date / Time Received by: (Signature)									

Distribution: Original Accompanied Shipment; Copy to Coordinator Field F

303908

CHAIN OF CUSTODY RECORD

HEGLINV
841 Chestnut Street
Philadelphia, Pennsylvania 19107

PROJ. NO. PROJECT NAME
Co3041 SCD
SAMPLERS: (Signature)

CEMETE
3041025
T.M.L.
CEMETE
3041025
T.M.L.

NO.
OF
CONTAINERS

STATION LOCATI
G R A B
C O M P .
T I M E
D A T E

1/4/90	1410	X	WS-1
1/4/90	1410	X	WS-2
1/4/90	0930	X	EQB-2

REMARKS

Case # 13413
File # 125.

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	1/4/90 1730				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Remarks	Shipped via Federal Express Air Bill No. 4575150506	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

AR304102

3 03907

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 3
841 Chestnut St.
Philadelphia, Pennsylvania 19107

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME	STATION LOCATION				NO. OF CON-TAINERS	REMARKS
CO 3041 5103-8	SRT <i>Dark John</i>	STA. NO.	DATE	TIME	CON. #	GRAB	Task No.
5105C-01	1/16/91 0610	TAKE-1	X	115-1		1	3-1063971 Do. MSD
5105C-02	1/16/91 0610	TAKE-1	X	115-2		1	3-1063975
5105C-03	1/16/91 1310	TAKE-1	X	115-3		1	3-1063981
5105C-04	1/16/91 1110	TAKE-1	X	115-4		1	3-1063977
5105C-05	1/16/91 1212	TAKE-1	Y	115-5		1	3-1110875
5105C-06	1/16/91 1042	TAKE-1	X	115-6		1	3-110879
5105C-07	1/16/91 1255	TAKE-1	X	115-7		1	3-110883
5105C-08	1/16/91 0930	TAKE-1	X	EGR-2		1	3-110887 EG BLANK

Relinquished by: (Signature)

Joe Andra

Date / Time

1/8/90
16:30

Received by: (Signature)

AR 304103

Date / Time

Received by: (Signature)

Remarks

Relinquished by: (Signature)

SNI APED

Date / Time

Received by: (Signature)

Date / Time

Relinquished by: (Signature)

Date / Time

Received by: (Signature)

Date / Time

SNI APED VIA FEDERAL EXPRESS
AIRBILL No. 457515032.

Distribution: Original Accompanions Shipment; Copy to Coordinator Field

20011

RON Off Enforcement

ECT AGEI

EGL
841 Chestn
Philadelphia, Penns

PROJ. NO. PROJECT NAME

COB/C
23-20

SAMPLERS: (Signature)

Indians

CHAIN OF CUSTODY RECORD

NO.

OF
CONTAINERS

STATION LOCATION

GRAB
COMP

STA. NO. DATE TIME

CB-1

STA. NO.	DATE	TIME	GRAB COMP	STATION LOCATION	CONTAINER NO.	REMARKS
CB-1	1/10/75	11:20	X	CB-1	1	3-103848 3-1033687 the 3-103709
CB-2	1/10/75	11:44	X	CB-2	4	3-1000215 4hr 3-11-0918
CB-3	1/10/75	11:55	X	CB-3	10	3-1103903 4hr 3-1103905
CB-7	1/10/75	12:22	X	CB-7	2	3-1103913 3-1103914

Relinquished by: (Signature) Date / Time Received by: (Signature) Date / Time Received by: (Signature)

1/10/75 1530

SH. or DO VIA P.D. & A. Lab. Evidence

Relinquished by: (Signature) Date / Time Received by: (Signature) Date / Time Received by: (Signature)

3/10/75 1445

A.R.S.L. No. 425-7314/973-2

Relinquished by: (Signature) Date / Time Received for Laboratory by: Date / Time Remarks

3/10/75

Original Accompanies

Shipment; Copy to Coordinator Field Files

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

3 03901

ATTACHMENT 3

Photographs

AR304111



Photograph 1. RP Contractor's Decontamination Line



Photograph 2. RP Contractor Collecting Soil Boring Samples

AR304112

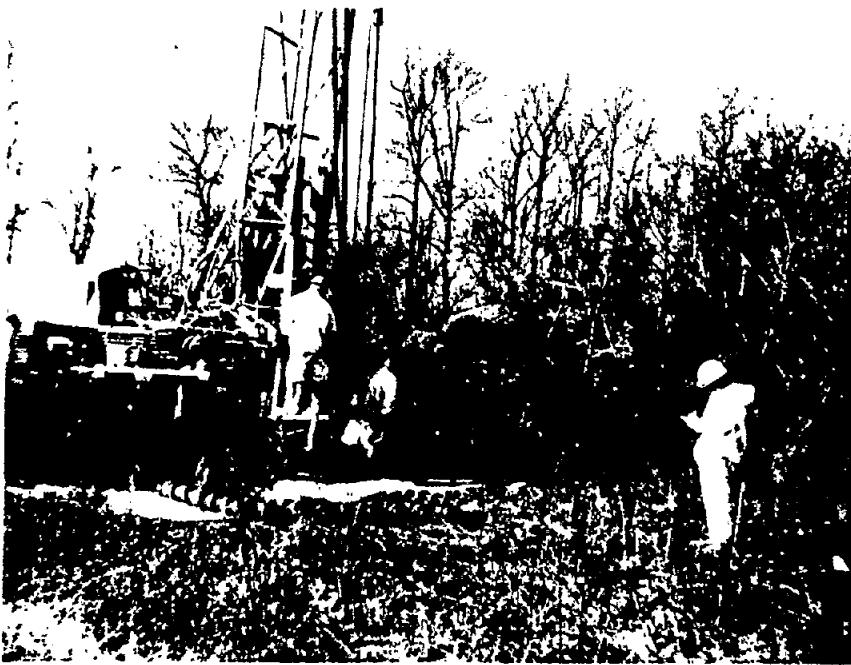


Photograph 3. RP Contractor Collecting Sample in Wetlands Area



Photograph 4. RP Contractor Screening Wetlands

AR304113



Photograph 5. RP Contractor Setting Up To Install Monitoring Well

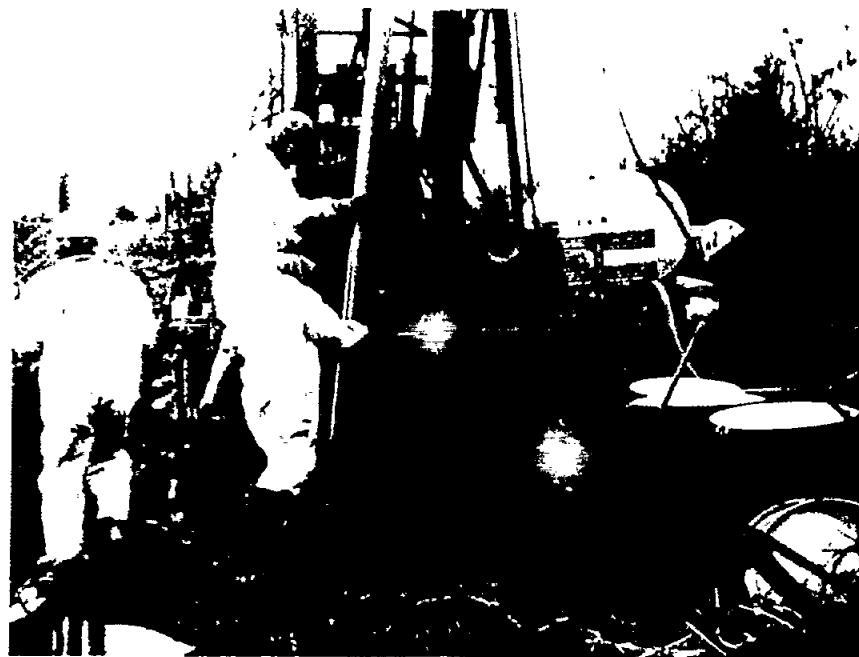


Photograph 6. RP Contractor Collecting Split Spoon Samples While
Installing Monitoring Well

AR304114

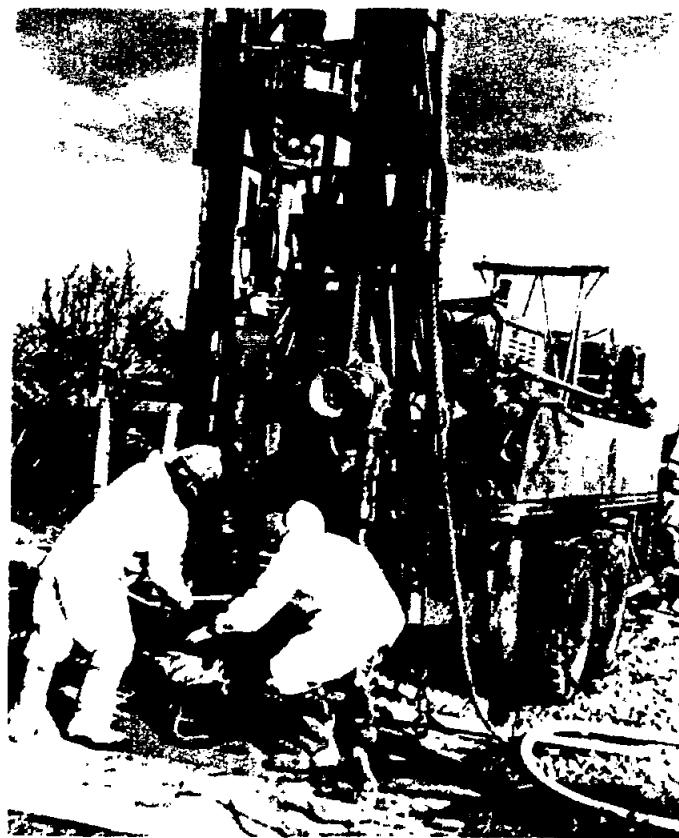


Photograph 7. RP Contractor Decontaminating Split Spoon Sampler



Photograph 8. RP Contractor Placing Stainless Steel Well Screen

AR304115



Photograph 9. RP Contractor Installing Stainless Steel Riser Pipe

AR304116